APPENDIX 1

Andrea, T.A., *et al.* J Med Chem **22**, 221-232 (1979).

Andrews *et al*, U.S. Patent No. 4,741,897, issued May 3, 1989.

Apriletti, J.W., Baxter, J.D., Lau, K.H & West, B.L. *Protein Expression and Purification* **6**, 363-370 (1995).

Apriletti, J.W., Baxter, J.D. & Lavin, T.N. *J. Biol. Chem.* **263**, 9409-9417 (1988).

Au-Fliegner, M., Helmer, E., Casanova, J., Raaka, B.M. & Samuels, H.H. *Mol Cell Biol* **13**, 5725-5737 (1993).

Baniahmad, A., *et al.* Mol Cell Biol **15**, 76-86 (1995).

Barettino, D., Vivanco Ruiz, M.M. & Stunnenberg, H.G. *Embo J* **13**, 3039-3049 (1994).

Beck-Peccoz, P., *et al.* J Clin Endocrinol Metab **78**, 990-993 (1994).

Bhat, M.K., McPhie, P. & Cheng, S.Y. *Biochem Biophys Res Commun* **210**, 464-471 (1995).

Blake, C.C. & Oatley, S.J. *Nature* **268**, 115-120 (1977).

Blake, C.C., Geisow, M.J., Oatley, S.J., Rerat, B. & Rerat, C. *J Mol Biol* **121**, 339-356 (1978).

Bourguet, W., Ruff, M., Chambon, P., Gronemeyer, H. & Moras, D. *Nature* **375**, 377-382 (1995).

Brent, G.A. *N Engl J Med* **331**, 847-853 (1994).

Brunger, A.T., Kuriyan, J. & Karplus, M. *Science* **235**, 458-460 (1987).

Casanova, J., *et al.* Mol Cell Biol **14**, 5756-5765 (1994).

Cavailles, V., *et al.* Embo J **14**, 3741-3751 (1995).

Chin *et al*, U.S. Patent No. 5,284,999, issued February 8, 1994.

Collaborative Computational Project, N.4. *Acta Crystallogr.* **D50**, 760-763 (1994).

Collingwood, T.N., Adams, M., Tone, Y & Chatterjee, V.K. *Mol Endocrinol* **8**, 1262-1277 (1994).

Cowtan, K. *Joint CCP4 and ESF-EACBM Newsletter on Protein Crystallography* **31**, 34-38 (1994).

Damm, K. & Evans, R.M. *Proc Natl Acad Sci U S A* **90**, 10668-10672 (1993).

Danielian, P.S., White, R., Lees, J.A. & Parker, M.G. *Embo J* **11**, 1025-1033 (1992).

Davies *et al*, U.S. Patent No. 5,322,933, issued June 21, 1994.

Dawson et al, U.S. Patent No. 5,466,861, issued November 14, 1995.

DeGroot *et al*, U.S. Patent No. 5,438,126, issued August 1, 1995.

Dietrich, S.W., Bolger, M.B., Kollman, P.A. & Jorgensen, E.C. *J Med Chem* **20**, 863-880 (1977).

Durand, B., *et al.* Embo J **13**, 5370-5382 (1994).

Ellis *et al*, U.S. Patent No. 4,766,121, issued August 23, 1988.

Ellis *et al*, U.S. Patent No. 4,826,876, issued May 2, 1989.

Ellis *et al*, U.S. Patent No. 4,910,305, issued March 20, 1990.

Emmett *et al*, U.S. Patent No. 5,061,798, issued October 29, 1991.

Evans, R.M. *Science* **240**, 889-895 (1988).

Evans *et al*, U.S. Patent No. 5,171,671, issued December 15, 1992.

Evans *et al*, U.S. Patent No. 5,312,732, issued May 17, 1994.

Fawell, S.E., Lees, J.A., White, R. & Parker, M.G. *Cell* **60**, 953-962 (1990).

Forman, B.M. & Samuels, H.H. *Mol. Endocrinol.* **4**, 1293-1301 (1990).

Gewirth, D.T. & Sigler, P.B. *Nature Structural Biology* **2**, 386-394 (1995).

Glass, C.K. *Endocr Rev* **15**, 391-407 (1994).

Hayashi, Y. Sunthornthepvarakul, T. & Refetoff, S. *J Clin Invest* **94**, 607-615 (1994).

Jones, T.A., Zou, J.Y., Cowan, S.W. & Kjeldgaard. *Acta Crystallogr A* **47**, 110-119 (1991).

Jorgensen, E.C. in *Hormonal Peptides and Proteins* (eds. Li, C.H.) 107-204 (Academic Press, New York, 1978).

Kabsch, W. *J. Appl. Crystallogr.* **26**, 795-800 (1993).

Kabsch, W. & Sander, C. *Biopolymers* **22**, 2577-2637 (1983).

Laskowski, R.A., Macarthur, M.W., Moss, D.S. & Thornton, J.M. *J. Appl. Crystallogr.* **26**, 283-291 (1993).

Latham, K.R., Apriletti, J.W., Eberhardt, N.L. & Baxter, J.D. *J Biol Chem* **256**, 12088-12093 (1981).

Laudet, V., Hanni, C., Coll, J., Catzeflis, F. & Stehelin, D. *Embo J* **11**, 1003-1013 (1992).

LeDouarin, B., *et al.* Embo J **14**, 2020-2033 (1995).

Lee, J.W., Ryan, F., Swaffield, J.C., Johnston, S.A. & Moore, D.D. *Nature* **374**, 91-94 (1995).

Lee, J.W., Choi, H.S., Gyuris, J., Brent, R. & Moore, D.D. *Molec. Endocrinol.* **9**, 243-254 (1995).

Leeson, P.D., Emmett, J.C., Shah, V.P., Showell, G.A., Novelli, R., Prain, H.D., Benson, M.G., Ellis, D., Pearce, N.J. & Underwood, A.H. *J. Med. Chem.* **32**, 320-336 (1989).

Leeson, P.D., Ellis, D., Emmett, J.D., Shah, V.P., Showell, G.A. & Underwood, A.H. *J. Leng, X., et al.* Mol Cell Biol **15**, 255-263 (1995).

Leng, X., Tsai, S.Y., O'Malley, B.W. & Tsai, M.J. J Steroid Biochem Mol Biol **46**, 643-661 (1993).

Lin, K.H., Parkison, C., McPhie, P. & Cheng, S.Y. *Mol. Endocrinol.* **5**, 485-492 (1991).

Luisi, B.F., *et al.* Nature **352**, 497-505 (1991).

McGrath, M.E., *et al.* J. Mol. Biol. **237**, 236-239 (1994).

McRee, D.E., *Practical Protein Crystallography*, Academic Press, N.Y. (1993), especially chapters 1, 2 and 3.

Meier, C.A., *et al.* Mol. Endocrinol. **6**, 248-258 (1992).

Miura *et al*, U.S. Patent No. 5,116,828, issued May 26, 1992.

Monaco, H.L., Rizzi, M. & Coda, A. *Science* **268**, 1039-1041 (1995).

Nicholls, A., Sharp, K.A. & Honig, B. *Proteins* **11**, 281-296 (1991).

O'Donnell, A.L., Rosen, E.D., Darling, D.S. & Koenig, R.J. *Mol. Endocrinol.* **5**, 94-99 (1991).

Otwinowski, Z. *Proceedings of the CCP4 Study Weekend 80-86 (SERC Daresbury Laboratory, Warrington, U.K., 1991).*

Otwinowski, Z. *Proceedings of the CCP4 Study Weekend: "Data Collection and Processing"* 56-62 (SERC Daresbury Laboratory, Warrington, U.K., 1993).

Ozato, U.S. Patent No. 5,403,925, issued April 4, 1995.

Rastinejad, R., Perlmann, T., Evans, R.M. & Sigler, P.B. *Nature* **375**, 203-211 (1995).

Refetoff, S., Weiss, R.E. & Usala, S.J. *Endocr. Rev.* **14**, 348-399 (1993).

Ribeiro, R.C.J., Kushner, P.J. & Baxter, J.D. *Annu. Rev. Med.* **46**, 443-453 (1995).

Ribeiro, R.C.J., *et al.* Ann. N. Y. Acad. Sci. **758**, 366-389 (1995).

Ribeiro, R.C., Kushner, P.J., Apriletti, J.W., West, B.L. & Baxter, J.D. *Mol. Endocrinol.* **6**, 1142-1152 (1992).

Saatcioglu, F., Bartunek, P., Deng, T., Zenke, M. & Karin, M. *Mol. Cell Biol.* **13**, 3675-3685 (1993).

Schwabe, J.W., Chapman, L., Finch, J.T. & Rhodes, D. *Cell* **75**, 567-578 (1993).

Selmi, S. & Samuels, H.H. *J. Biol. Chem.* **266**, 11589-11593 (1991).

Swaffield, J.C., Melcher, K. & Johnston, S.A. *Nature* **374**, 88-91 (1995).

Toney, J.H. *et al.* Biochemistry **32**, 2-6 (1993).

Tsai, M.J. & O'Malley, B.W. *Annu. Rev. Biochem.* **63**, 451-486 (1994).

Zenke, M., Munoz, A., Sap, J., Vennstrom, B. & Beug, H. *Cell* **61**, 1035-1049 (1990).

APPENDIX 2

Table 8

Dimit Atom	Amino Acid in full length α	Amino Acid Atom	Distance A
C16	215-PHE	CD1	3.98
C16	215-PHE	CE1	3.86
C19	218-PHE	O	3.69
C16	218-PHE	CB	3.89
C18	218-PHE	CB	3.92
C19	218-PHE	CB	4.13
C18	218-PHE	CD2	3.77
C16	219-THR	CG2	3.68
C19	221-ILE	CG1	4.11
C6	222-ILE	CD1	4.18
C8	222-ILE	CD1	3.72
C10	222-ILE	CD1	3.53
C12	222-ILE	CD1	3.85
O1	222-ILE	CD1	4.13
C13	225-ALA	C8	3.64
O4	225-ALA	C8	4.02
O4	228-ARG	CZ	3.96
C17	228-ARG	NH2	3.36
O3	228-ARG	NH2	3.58
O4	228-ARG	NH2	2.86
C10	256-MET	SD	3.70
C12	256-MET	SD	3.89
C10	256-MET	CE	3.88
C12	256-MET	CE	3.83
C11	259-MET	C	4.03
C11	259-MET	O	3.66
C15	259-MET	O	3.42
N1	259-MET	O	3.71
C1	259-MET	C8	4.20
C11	259-MET	C8	3.87
C13	259-MET	C8	4.09
C15	262-ARG	C8	4.03
C17	262-ARG	C8	3.58
O3	262-ARG	C8	3.62
O4	262-ARG	C8	3.85
C17	262-ARG	CD	4.10
O4	262-ARG	CD	3.61
N1	263-ALA	N	3.71
C17	263-ALA	CA	3.69
N1	263-ALA	CB	3.46
O3	266-ARG	NH1	3.93
N1	275-THR	O	3.62
N1	276-LEU	CA	3.51
N1	276-LEU	C	3.92
C5	276-LEU	CD1	4.05
C19	276-LEU	CD1	4.04
C7	276-LEU	CD2	4.09
C9	276-LEU	CD2	3.95
C11	276-LEU	CD2	4.13
N1	276-LEU	CD2	4.17
C13	277-SER	N	4.14
C15	277-SER	N	3.79

Dimit Atom	Amino Acid in full length α	Atom	Distance A
C17	277-SER	N	3.69
N1	277-SER	N	3.30
O3	277-SER	N	3.19
C17	277-SER	CA	3.92
O3	277-SER	CA	3.35
C13	277-SER	OG	3.92
C7	287-LEU	CD2	3.90
C18	290-GLY	C	4.04
C18	290-GLY	O	3.54
C18	291-GLY	CA	4.04
C18	292-LEU	N	4.20
C2	292-LEU	CG	4.18
C4	292-LEU	CG	3.86
C6	292-LEU	CG	4.01
C2	292-LEU	CD1	3.88
C4	292-LEU	CD1	4.02
O2	292-LEU	CD1	4.07
C4	292-LEU	CD2	4.05
C6	292-LEU	CD2	3.72
C8	292-LEU	CD2	3.69
C10	292-LEU	CD2	3.98
O1	292-LEU	CD2	4.16
C20	299-ILE	CD1	3.87
C8	381-HIS	CD2	3.90
C10	381-HIS	CD2	3.84
O1	381-HIS	GO2	3.40
O1	381-HIS	CE1	3.72
C8	381-HIS	NE2	3.47
C10	381-HIS	NE2	3.51
O1	381-HIS	NE2	2.64
C6	388-MET	CE	3.90
C8	401-PHE	CE1	4.19
O1	401-PHE	CE1	3.37
C16	401-PHE	CZ	3.97
O1	401-PHE	CZ	3.28
N1	502-H_2O	O1	3.35
O3	502-H_2O	O1	2.56
O3	503-H_2O	O1	3.13
O4	503-H_2O	O1	3.72
O4	504-H_2O	O1	2.72

Legend to Table 8. The table lists the interactions with Dimit (DMT). The column headings are as follows:
#1 The atom of Dimit that interacts with the amino acid of the receptor. These are also numbered in figure 32.
#2 The amino acid in the full length rTRα that interacts with the ligand.
#3 The name of the atom in the amino acid (standard nomenclature) where the interaction occurs.
#4 The distance in A between Dimit and the protein atom.

Table 9

Triac Atom	Amino Acid in full length *a*	Amino Acid Atom	Distance A
I1	218-PHE	O	3.52
I1	221-ILE	CD1	4.16
I1	221-ILE	CG1	3.92
I1	222-ILE	CA	4.15
I1	222-ILE	CB	4.03
I1	222-ILE	CG1	3.92
C8	222-ILE	CD1	4.12
C10	222-ILE	CD1	3.77
C12	222-ILE	CD1	3.79
C13	225-ALA	CB	4.17
C3	225-ALA	CB	3.86
C10	256-MET	SD	3.45
C12	256-MET	SD	3.73
C10	256-MET	CE	3.66
C12	256-MET	CE	3.77
I3	256-MET	CE	3.89
C1	259-MET	O	3.93
C11	259-MET	O	3.24
O3	259-MET	O	4.09
C1	259-MET	CB	3.89
C13	259-MET	O	3.74
C14	259-MET	O	3.96
C1	259-MET	CB	3.89
C11	259-MET	CB	3.68
C13	259-MET	CB	4.01
C11	259-MET	CA	4.13
C13	259-MET	CA	4.20
I3	260-SER	CA	4.10
I3	260-SER	OG	4.19
C14	262-ARG	CB	4.07
O4	262-ARG	CB	3.60
O3	263-ALA	N	3.79
C14	263-ALA	N	4.12
O3	263-ALA	CA	3.67
O3	263-ALA	CB	3.49
C11	263-ALA	CB	4.00
C14	266-ARG	CZ	3.89
O3	266-ARG	CZ	4.01
O4	266-ARG	CZ	3.03
C14	266-ARG	NH1	3.25
O3	266-ARG	NH1	3.00
O4	266-ARG	NH1	2.82
C14	266-ARG	NH2	3.48
O3	266-ARG	NH2	4.01
O4	266-ARG	NH2	2.34
O3	275-THR	C	4.02
C14	275-THR	O	4.20
O3	275-THR	O	3.20
O3	278-LEU	CA	3.11
O3	276-LEU	C	3.52
O3	276-LEU	N	4.04
C14	276-LEU	CA	3.98
O3	276-LEU	CA	3.11

Triac Atom	Amino Acid in full length α	Amino Acid Atom	Distance A
C14	276-LEU	C	3.98
O3	276-LEU	CB	3.95
O2	276-LEU	CD1	4.03
I1	276-LEU	CD1	4.10
C7	276-LEU	CD2	3.84
C9	276-LEU	CD2	3.73
CII	276-LEU	CD2	4.06
O2	276-LEU	CD2	4.10
O3	276-LEU	CD2	3.91
C13	277-SER	N	4.06
C14	277-SER	N	3.13
O4	277-SER	N	3.28
O3	277-SER	N	3.05
C14	277-SER	CA	3.76
O4	277-SER	CA	3.52
C3	277-SER	OG	3.87
C13	277-SER	OG	4.02
C14	277-SER	OG	4.14
I2	290-GLY	O	3.57
I2	292-LEU	CG	3.94
C4	292-LEU	CG	3.95
C6	292-LEU	CG	3.65
C8	292-LEU	CG	4.02
C2	292-LEU	CD1	4.11
C4	292-LEU	CD1	3.85
C6	292-LEU	CD1	4.02
I2	292-LEU	CD2	3.98
C4	292-LEU	CD2	4.11
C6	292-LEU	CD2	3.44
C8	292-LEU	CD2	3.28
C10	292-LEU	CD2	3.88
O1	292-LEU	CD2	3.35
I3	299-ILE	CD1	3.77
C8	381-HIS	CD2	3.87
C10	381-HIS	CD2	3.90
O1	381-HIS	GO2	3.20
O1	381-HIS	CE1	3.82
C8	381-HIS	NE2	3.57
C10	381-HIS	NE2	3.52
O1	381-HIS	NE2	2.64
O1	388-MET	CE	4.03
O1	401-PHE	CE1	3.86
01	401-PHE	CZ	3.70
C13	460-H_2O	01	4.00

Legend to Table 9. The table lists the interactions with Triac. The column headings are as follows:
#1 The atom of Triac that interacts with the amino acid of the receptor. These are also numbered in figure 32.
#2 The amino acid in the full length rTRα that interacts with the ligand.
#3 The name of the atom in the amino acid (standard nomenclature) where the interaction occurs.
#4 The distance in A between Triac and the protein atom.

Table 10

$IpBR_2$ Atom	Amino Acid in full length α	Amino Acid Atom	Distance A
C16	215-PHE	CD1	4.01
C16	215-PHE	CE1	3.78
BR1	218-PHE	O	3.24
BR1	218-PHE	C	3.98
C16	218-PHE	CB	3.81
C18	218-PHE	CB	3.92
BR1	218-PHE	CB	4.08
C18	218-PHE	CD2	3.92
C16	219-THR	CG2	3.45
BR1	221-ILE	CG1	3.81
BR1	221-ILE	CD1	4.07
BR1	222-ILE	CB	3.81
BR1	222-ILE	CG1	3.97
C6	222-ILE	CD1	4.07
C8	222-ILE	CD1	3.64
C10	222-ILE	CD1	3.50
C12	222-ILE	CD1	3.82
01	222-ILE	CD1	4.08
C13	225-ALA	CB	3.76
04	225-ALA	CB	4.01
04	228-ARG	CZ	3.92
C17	228-ARG	NH2	3.26
03	228-ARG	NH2	3.43
04	228-ARG	NH2	2.79
C10	256-MET	SD	3.65
C12	256-MET	SD	3.71
C10	256-MET	CE	3.90
C12	256-MET	CE	3.75
BR2	256-MET	CE	4.03
C11	259-MET	C	3.98
C11	259-MET	0	3.52
C15	259-MET	O	3.44
N1	259-MET	O	3.76
C11	259-MET	CB	3.87
N1	262-ARG	C	4.03
C15	262-ARG	CB	4.03
C17	262-ARG	CB	3.56
03	262-ARG	CB	3.55
04	262-ARG	CB	3.91
C17	262-ARG	CD	4.09
04	262-ARG	CD	3.71
N1	263-ALA	N	3.61
N1	263-ALA	CA	3.59
N1	263-ALA	CB	3.54
03	266-ARG	NH1	3.93
N1	275-THR	O	3.43
N1	276-LEU	CA	3.46
N1	276-LEU	C	3.83
C5	276-LEU	CD1	4.02
C7	276-LEU	CD2	4.00
C9	276-LEU	CD2	3.81
C11	276-LEU	CD2	3.91
C13	277-SER	N	3.79

	$IpBR_2$ Atom	Amino Acid in full length α	Amino Acid Atom	Distance A
1	C15	277-SER	N	3.63
2	C17	277-SER	N	3.70
3	N1	277-SER	N	3.17
4	03	277-SER	N	3.37
5	C17	277-SER	CA	3.89
6	03	277-SER	CA	3.43
7	C13	277-SER	OG	3.66
8	02	287-LEU	CD1	4.05
9	C18	290-GLY	C	4.04
10	C18	290-GLY	O	3.48
11	C18	291-GLY	CA	4.02
12	C4	292-LEU	CG	3.89
13	C6	292-LEU	CG	4.02
14	C2	292-LEU	CD1	3.79
15	C4	292-LEU	CD1	3.96
16	02	292-LEU	CD1	3.97
17	C4	292-LEU	CD2	4.07
18	C6	292-LEU	CD2	3.75
19	C8	292-LEU	CD2	3.67
20	C10	292-LEU	CD2	3.92
21	BR2	299-ILE	CD1	3.68
22	C8	381-HIS	CD2	3.92
23	C10	381-HIS	CD2	3.78
24	01	381-HIS	GD2	3.50
25	01	381-HIS	CE1	3.62
26	C8	381-HIS	NE2	3.36
27	C10	381-HIS	NE2	3.34
28	01	381-HIS	NE2	2.62
29	C8	401-PHE	CE1	4.02
30	01	401-PHE	CE1	3.19
31	C16	401-PHE	CZ	4.03
32	01	401-PHE	CZ	3.06
33	03	502-H_2O	01	3.40
34	N1	502-H2O	01	3.12
35	04	503-H_2O	01	3.20
36	C17	503-H2O	01	3.04
37	03	503-H_2O	01	2.27
38	C15	504-H2O	01	4.01
39	C17	504-H_2O	01	2.99
40	03	504-H2O	01	3.80
41	04	504-H_2O	01	1.78

42

43 Legend to Table 10. The table lists the interactions with IpBr2. The column headings are as
44 follows:
45 #1 The atom of IpBr2 that interacts with the amino acid of the receptor. These are also
46 numbered in figure 32.
47 #2 The amino acid in the full length rTRα that interacts with the ligand.
48 #3 The name of the atom in the amino acid (standard nomenclature) where the interaction
49 occurs.
50 #4 The distance in A between IpBr2 and the protein atom.
51

Table 11

T3 Atom	Amino Acid in full length α	Amino Acid Atom	Distance A
I2	215-PHE	CD1	4.08
I1	218-PHE	O	3.19
I1	218-PHE	CB	3.99
C4	218-PHE	CB	4.04
I1	218-PHE	C	3.79
I1	218-PHE	CB	3.99
I1	221-ILE	CG1	4.01
I1	222-ILE	CB	3.95
I1	222-ILE	CG1	3.91
C8	222-ILE	CD1	3.99
C10	222-ILE	CD1	3.57
C12	222-ILE	CD1	3.68
C13	225-ALA	CB	3.66
C3	225-ALA	CB	4.04
O4	228-ARG	NH1	3.23
O4	228-ARG	CZ	3.45
C15	228-ARG	NH2	3.54
O3	228-ARG	NH2	3.90
O4	228-ARG	NH2	2.86
C10	256-MET	SD	3.73
C12	256-MET	SD	3.90
C10	256-MET	CE	3.97
C12	256-MET	CE	3.92
I3	256-MET	CE	3.89
C11	259-MET	C	3.95
C11	259-MET	O	3.59
C14	259-MET	O	3.51
N1	259-MET	O	3.88
C1	259-MET	CB	4.06
C11	259-MET	CB	3.77
C13	259-MET	CB	3.96
C15	262-ARG	CB	3.61
C14	262-ARG	CB	4.02
O3	262-ARG	CB	3.65
O4	262-ARG	CB	3.92
O4	262-ARG	CD	3.72
N1	263-ALA	N	3.81
N1	263-ALA	CA	3.81
N1	263-ALA	CB	3.63
N1	275-THR	O	3.54
N1	276-LEU	CA	3.38
N1	276-LEU	C	3.73
C5	276-LEU	CD1	4.00
C7	276-LEU	CD1	4.05
O2	276-LEU	CD1	4.03
C7	276-LEU	CD2	3.80
C9	276-LEU	CD2	3.70
C11	276-LEU	CD2	4.01
C14	277-SER	N	3.67
C15	277-SER	N	3.62
N1	277-SER	N	3.07
O3	277-SER	N	3.24
C15	277-SER	CA	3.77

	T3 Atom	Amino Acid in full length α	Amino Acid Atom	Distance A
1	O3	277-SER	CA	3.34
2	C13	277-SER	OG	3.92
3	I2	290-GLY	O	3.50
4	C4	292-LEU	CG	3.95
5	C8	292-LEU	CG	3.83
6	C2	292-LEU	CD1	4.07
7	C4	292-LEU	CD1	3.99
8	C4	292-LEU	CD2	4.09
9	C6	292-LEU	CD2	3.58
10	C8	292-LEU	CD2	3.50
11	C10	292-LEU	CD2	3.96
12	O1	292-LEU	CD2	3.71
13	I3	299-ILE	CD1	3.74
14	C8	381-HIS	CD2	3.94
15	C10	381-HIS	CD2	3.97
16	O1	381-HIS	CD2	3.39
17	O1	381-HIS	CD1	3.82
18	C8	381-HIS	NE2	3.47
19	C10	381-HIS	NE2	3.55
20	O1	381-HIS	NE2	2.70
21	O1	388-MET	CE	3.88
22	O1	401-PHE	CE1	3.52
23	O1	401-PHE	CZ	3.32
24	C14	502-H2O	O1	4.01
25	C15	502-H2O	O1	3.61
26	O3	502-H2O	O1	2.51
27	C15	503-H2O	O1	3.31
28	O4	503-H_2O	O1	3.10
29	N1	502-H_2O	O1	3.27
30	O3	503-H2O	O1	2.81
31	C15	504-H2O	O1	3.92
32	O4	504-H2O	O1	2.73

Legend to Table 11. The table lists the interactions with T3. The column headings are as follows:
#1 The atom of T3 that interacts with the amino acid of the receptor. These are also numbered in figure 32.
#2 The amino acid in the full length rTRα that interacts with the ligand.
#3 The name of the atom in the amino acid (standard nomenclature) where the interaction occurs.
#4 The distance in A between T3 and the protein atom.

Table 12

Triac Atom	Amino Acid in full length hTR β	Amino Acid Atom	Distance A
I2	269-PHE	CD1	3.75
I2	269-PHE	CE1	3.88
I1	272-PHE	C	4.03
I1	272-PHE	O	3.54
I1	275-ILE	CG1	3.93
I1	276-ILE	CG1	4.02
C3	279-ALA	CB	3.81
C13	279-ALA	CB	3.87
C10	310-MET	SD	3.72
C12	310-MET	SD	3.78
C10	310-MET	CE	4.02
C12	310-MET	CE	3.92
I3	310-MET	CE	3.93
C13	313-MET	CA	3.94
C11	313-MET	C	3.72
C1	313-MET	O	3.79
C11	313-MET	O	3.12
C13	313-MET	O	3.55
C1	313-MET	CB	4.00
C11	313-MET	CB	3.82
C13	313-MET	CB	3.76
C13	313-MET	CG	3.88
O3	316-ARG	CB	3.99
O4	317-ALA	CA	4.08
04	317-ALA	CA	4.10
C11	317-ALA	CB	3.70
I3	317-ALA	CB	4.10
O4	317-ALA	CB	4.06
O4	320-ARG	NH1	3.58
O3	320-ARG	NH2	3.55
04	320-ARG	NH2	4.04
04	329-THR	O	3.55
04	330-LEU	CA	3.42
04	330-LEU	C	3.77
C3	330-LEU	CB	4.06
C5	330-LEU	CB	4.08
C1	330-LEU	CD2	4.07
C3	330-LEU	CD2	4.00
C5	330-LEU	CD2	3.73
C7	330-LEU	CD2	3.51
C9	330-LEU	CD2	3.54
C11	330-LEU	CD2	3.86
C15	331-ASN	N	3.55
O3	331-ASN	N	3.74
O4	331-ASN	N	3.12
03	331-ASN	CA	4.02
I2	344-GLY	O	3.87
C6	346-LEU	CD2	3.87
C8	346-LEU	CD2	3.84
01	346-LEU	CD2	3.91
I3	353-ILE	CD1	3.51
C8	435-HIS	CD2	3.93
C10	435-HIS	CD2	3.79

Triac Atom	Amino Acid in full length hTR β	Amino Acid Atom	Distance A
O1	435-HIS	CD2	3.33
O1	435-HIS	CE1	3.81
C8	435-HIS	NE2	3.42
C10	435-HIS	NE2	3.33
O1	435-HIS	NE2	2.67
O1	442-MET	SD	3.96
O1	442-MET	CE	3.72
I2	442-MET	SD	4.01
O1	455-PHE	CE1	3.92
O1	455-PHE	CZ	3.50

Legend to Table 12. The table lists the interactions with Triac. The column headings are as follows:

#1 The atom of Triac that interacts with the amino acid of the receptor. These are also numbered in figure 32.

#2 The amino acid in the full length hTRβ that interacts with the ligand.

#3 The name of the atom in the amino acid (standard nomenclature) where the interaction occurs.

#4 The distance in A between Triac and the protein atom.

Table 13

GC1 Atom	Amino Acid in full length TR β	Amino Acid Atom	Distance A
C16	269-PHE	CE1	3.99
C19	272-PHE	O	3.85
C16	272-PHE	CB	3.98
C16	273-THR	CG2	3.76
C19	275-ILE	CG1	3.98
C19	276-ILE	CA	3.98
C2	276-ILE	CD1	3.88
C8	276-ILE	CD1	3.77
C10	276-ILE	CD1	3.58
C12	276-ILE	CD1	3.62
C19	276-ILE	CD1	3.56
C1	279-ALA	CB	3.68
C3	279-ALA	CB	3.56
O5	279-ALA	CB	3.11
O4	279-ALA	CB	3.90
O3	282-ARG	CZ	3.53
C17	282-ARG	NH1	3.87
O3	282-ARG	NH1	3.20
O4	282-ARG	NH1	3.85
C17	282-ARG	NH2	3.63
O3	282-ARG	NH2	3.00
C10	310-MET	SD	3.86
C12	310-MET	SD	3.91
C11	313-MET	C	3.85
C11	313-MET	O	3.41
C15	313-MET	O	3.87
C20	313-MET	O	3.99
C11	313-MET	CB	3.79
C1	313-MET	CG	3.94
C11	313-MET	CG	3.91
O5	313-MET	CG	3.87
O4	313-MET	CG	3.79
C20	314-SER	CA	4.00
C17	316-ARG	CB	3.95
C17	316-ARG	CD	3.80
O3	316-ARG	CD	3.83
O4	316-ARG	CD	3.51
C20	317-ALA	CB	3.93
C7	330-LEU	CD2	3.56
C9	330-LEU	CD2	3.63
C21	330-LEU	CD2	3.90
O5	331-ASN	N	3.62
C15	331-ASN	N	3.67
C18	344-GLY	O	3.60
C18	346-LEU	CG	3.89
C6	346-LEU	CD2	3.77
C8	346-LEU	CD2	3.80
C10	435-HIS	CD2	3.89
O1	435-HIS	CD2	3.64
O1	435-HIS	CE1	3.79
C8	435-HIS	NE2	3.44

GC1 Atom	Amino Acid in full length TR β	Amino Acid Atom	Distance A
C10	435-HIS	NE2	3.33
O1	435-HIS	NE2	2.77
O1	455-PHE	CE1	3.40
O1	455-PHE	CZ	3.22

Legend to Table 13. The table lists the interactions with GC1. The column headings are as follows:

#1 The atom of GC1 that interacts with the amino acid of the receptor. These are also numbered in figure 32.

#2 The amino acid in the full length hTRβ that interacts with the ligand.

#3 The name of the atom in the amino acid (standard nomenclature) where the interaction occurs.

#4 The distance in A between GC1 and the protein atom.

Table 14

Coordination Structure of TR-α and Dimit

Coordination Structure	R_1	R_2	R_3	R_5	R_6	R'_2	R'_3	R'_4	R'_5	R'_6	X
	$-CH_2-CH(NH_2)(CO_2)H$	-H	$-CH_3$	$-CH_3$	-H	-H	$-CH(CH_3)_2$	-OH	-H	-H	O
AA							215				
SS							H3				
AA			218				218				
SS	-		H3				H3				
AA							219				
SS							H3				
AA			221								
SS			H3								
AA							222	222	222	222	
SS							H3	H3	H3	H3	
AA	225										
SS	H3										
AA	228										
SS	H3										
AA									256	256	
SS									H5-H6	H5-H6	
AA	259				259						–
SS	H5-H6				H5-H6						
AA	262										
SS	H5-H6										
AA	263										
SS	H5-H6										
AA	266										
SS	loop										
AA	275										
SS	S3										
AA	276		276	276	276						
SS	S3		S3	S3	S3						
AA	277										
SS	loop										
AA							290-291				
SS							loop				
AA						292	292	292	292		292
SS						loop	loop	loop	loop		loop
AA				299							
SS				H8							
AA								381	381		
SS								H11	H11		
AA							388				
SS							H11				
AA							401	401			
SS							H12	H12			
AA	HOH5O2/HOH5O3/HOH5O4										
SS											

AA = Amino Acid SS = Secondary Structure

Table 15

Coordination Structure of TR-α and Triac

Coordination Structure	R_1	R_2	R_3	R_5	R_6	R'_2	R'_3	R'_4	R'_5	R'_6	X
	$-CH_2-COOH$	-H	-I	-I	-H	-H	-I	-OH	-H	-H	O
AA			218								
SS	-		H3								
AA			221								
SS			H3								
AA							222	222	222	222	
SS							H3	H3	H3	H3	
AA	225										
SS	H3										
AA				256					256	256	
SS				H5-H6					H5-H6	H5-H6	
AA	259				259						
SS	H5-H6				H5-H6						
AA	262										
SS	H5-H6										
AA	263										
SS	H5-H6										
AA	266										
SS	loop										
AA	275										
SS	S3										
AA	276		276	276	276						
SS	S3		S3	S3	S3						
AA	277										
SS	loop										
AA							290				
SS							loop				
AA						292	292	292	292		292
SS						loop	loop	loop	loop		loop
AA				299							
SS				H8							
AA								381	381		
SS								H11	H11		
AA								388			
SS								H11			
AA							401	401			
SS							H12	H12			

AA = Amino Acid SS = Secondary Structure

Table 16

Coordination Structure of TR-α and IpBr2

Coordination Structure	R_1	R_2	R_3	R_5	R_6	R'_2	R'_3	R'_4	R'_5	R'_6	X
	$-CH_2-CH(NH_2)(CO_2)H$	-H	-Br	-Br	-H	-H	$-CH(CH_3)_2$	-OH	-H	-H	O
AA							215				
SS							H3				
AA			218				218				
SS			H3				H3				
AA							219				
SS							H3				
AA			221								
SS			H3								
AA							222	222	222	222	
SS							H3	H3	H3	H3	
AA	225										
SS	H3										
AA	228										
SS	H3										
AA					256				256	256	
SS					H5-H6				H5-H6	H5-H6	
AA	259				259						
SS	H5-H6				H5-H6						
AA	262										
SS	H5-H6										
AA	263										
SS	H5-H6										
AA	266										
SS	loop										
AA	275										
SS	S3										
AA	276		276	276	276						
SS	S3		S3	S3	S3						
AA	277										
SS											
AA							290-291				
SS							loop				
AA						292	292	292	292		292
SS						loop	loop	loop	loop		loop
AA				299							
SS				H8							
AA								381	381		
SS								H11	H11		
AA							401	401			
SS							H12	H12			
AA	HOH5O2/HOH 5O3/HOH5O4										
SS											

AA = Amino Acid SS = Secondary Structure

Table 17

Coordination Structure of TR-α and Dimit

Coordination Structure	R_1	R_2	R_3	R_5	R_6	R'_2	R'_3	R'_4	R'_5	R'_6	X
	$-CH_2-CH(NH_2)(CO_2)H$	-H	-I	-I	-H	-H	-I	-OH	-H	-H	O
AA							215				
SS							H3				
AA			218			218					
SS	-		H3			H3					
AA			221								
SS			H3								
AA							222	222	222	222	
SS							H3	H3	H3	H3	
AA	225										
SS	H3										
AA	228										
SS	H3										
AA					256				256	256	
SS					H5-H6				H5-H6	H5-H6	
AA	259				259						
SS	H5-H6				H5-H6						
AA	262										
SS	H5-H6										
AA	263										
SS	H5-H6										
AA	275										
SS	S3										
AA	276		276	276	276						
SS	S3		S3	S3	S3						
AA	277										
SS											
AA							290				
SS							loop				
AA						292	292	292	292		292
SS						loop	loop	loop	loop		loop
AA				299							
SS				H8							
AA								381	381		
SS								H11	H11		
AA								388			
SS								H11			
AA							401	401			
SS							H12	H12			
AA	HOH502/HOH 503/HOH504										
SS											

AA = Amino Acid SS = Secondary Structure

Table 18

Coordination Structure of TR-β and Triac

Coordination Structure	R1	R2	R3	R5	R6	R2'	R3'	R4'	R5'	R6'	X
	$-CH_2CO_2H$	H	I	I	H	H	I	OH	H	H	O
AA	-						269				
SS							H3				
AA			272								
SS			H3								
AA			275								
SS			H3								
AA			276								
SS			H3								
AA	279	279									
SS	H3	H3									
AA				310					310	310	
SS				H5-H6					H5-H6	H5-H6	
AA	313				313						
SS	H5-H6				H5-H6						
AA	316										
SS	H5-H6										
AA	317				317		317				
SS	H5-H6				H5-H6		H5-H6				
AA	320										
SS	H5-H6										
AA	329										
SS	S3										
AA	330	330	330	330	330						
SS	S3	S3	S3	S3	S3						
AA	331										
SS	loop										
AA							344				
SS							loop				
AA							346	346			
SS							loop	loop			
AA				353							
SS				H8							
AA								435	435		
SS								H11	H11		
AA							442	442			
SS							H11	H11			
AA								455			
SS								H12			

AA = Amino Acid SS = Secondary Structure

Table 19

Coordination Structure of TR-β and GC1

Coordination Structure	R_1	R_2	R_3	R_5	R_6	R2	R3	R4	R5	R6	X
	$-O-CH_2CO_2H$	H	CH_3	CH_3	H	H	$CH(CH_3)$	OH	H	H	CH_2
AA							269				
SS							H3				
AA			272								
SS			H3								
AA			273				273				
SS			H3				H3				
AA			275								
SS			H3								
AA			276					276	276	276	
SS			H3					H3	H3	H3	
AA	279	279									
SS	H3	H3									
AA	282										
SS	H3										
AA				310					310	310	
SS				H5-H6					H5-H6	H5-H6	
AA	313				313						
SS	H5-H6				H5-H6						
AA							314				
SS							H5-H6				
AA	316										
SS	H5-H6										
AA							317				
SS							H5-H6				
AA	320										
SS	H5-H6										
AA	329										
SS	S3										
AA	330			330							
SS	S3			S3							
AA	331										
SS	loop										
AA							344				
SS							loop				
AA							346	346			
SS							loop	loop			
AA				353							
SS				H8							
AA								435	435		
								H11	H11		
								455			
SS								H12			

AA = Amino Acid SS = Secondary Structure

APPENDIX 3

TR_DMT.PDB

```
REMARK TR_dmt full length numbering
REMARK
REMARK Rfactor 0.205 Rfree 0.227
REMARK Resolution 15. 2.2 all reflections
REMARK
REMARK Three cacodylate-modified cysteines (CYA)
REMARK Cya334, Cya380, Cya392
REMARK cacodylate modeled as single arsenic atom
REMARK
REMARK side chain of certain residues modeled as ALA due to poor density;
REMARK however, residue name reflects true residue for clarity
REMARK
REMARK clone obtained from Murray et. al.
REMARK deposited sequence confirmed,
REMARK differing from that reported by Thompson et. al.
REMARK in the following codons:
REMARK 281 Thr - Ala
REMARK 285 Lys - Glu
REMARK identical to that reported by Mitsuhashi et. al.
REMARK gb:RNTRAVI X07409
JRNL        AUTH   M.B. MURRAY, N.D.ZILZ, N.L.MCCREARY,M.J.MACDONALD
JRNL        AUTH 2 H.C.TOWLE
JRNL        TITL   ISOLATION AND CHARACTERIZATION OF RAT CDNA CLONES
FOR TWO
JRNL        TITL 2 DISTINCT THYROID HORMONE RECPTORS
JRNL        REF    JBC                  V. 263 25  1988
JRNL        AUTH   C.C.THOMPSON, C.WEINBERGER, R.LEBO, R.M.EVANS
JRNL        TITL   IDENTIFICATION OF A NOVEL THYROID HORMONE RECEPTOR
EXPRESSED
JRNL        TITL 2 IN THE MAMMALIAN CENTRAL NERVOUS SYSTEM
JRNL        REF    SCIENCE              V. 237     1987
JRNL        AUTH   T.MITSUHASHI,G.TENNYSON,V.NIKODEM
JRNL        TITL   NUCLEOTIDE SEQUENCE OF NOVEL CDNAS GENERATED BY
ALTERNATIVE
JRNL        TITL 2 SPLICING OF A RAT THYROID HORMONE RECEPTOR GENE
TRANSCRIPT
JRNL        REF    NUC. ACIDS. RES.     V. 16  12  1988
ATOM      1  N   ARG   157      68.504   8.445   5.651  1.00 68.93
ATOM      2  CA  ARG   157      67.886   9.543   6.398  1.00 56.98
ATOM      3  CB  ARG   157      68.769  10.789   6.324  1.00 59.25
ATOM      4  CG  ARG   157      70.147  10.632   6.932  1.00 58.90
```

```
ATOM      5  CD  ARG   157      70.068  10.422   8.425  1.00 59.37
ATOM      6  NE  ARG   157      71.392  10.446   9.036  1.00 63.94
ATOM      7  CZ  ARG   157      71.613  10.329  10.341  1.00 64.39
ATOM      8  NH1 ARG   157      70.596  10.182  11.179  1.00 62.14
ATOM      9  NH2 ARG   157      72.855  10.365  10.808  1.00 65.56
ATOM     10  C   ARG   157      66.500   9.881   5.854  1.00 48.97
ATOM     11  O   ARG   157      66.351  10.203   4.674  1.00 48.61
ATOM     12  N   PRO   158      65.469   9.818   6.712  1.00 41.90
ATOM     13  CD  PRO   158      65.550   9.366   8.112  1.00 41.06
ATOM     14  CA  PRO   158      64.083  10.114   6.333  1.00 39.34
ATOM     15  CB  PRO   158      63.286   9.704   7.576  1.00 37.89
ATOM     16  CG  PRO   158      64.260   9.883   8.693  1.00 42.40
ATOM     17  C   PRO   158      63.814  11.573   5.930  1.00 37.10
ATOM     18  O   PRO   158      64.189  12.517   6.636  1.00 33.31
ATOM     19  N   GLU   159      63.171  11.733   4.778  1.00 30.56
ATOM     20  CA  GLU   159      62.821  13.038   4.231  1.00 24.26
ATOM     21  CB  GLU   159      62.553  12.904   2.727  1.00 19.19
ATOM     22  CG  GLU   159      63.788  12.677   1.874  1.00 20.60
ATOM     23  CD  GLU   159      64.407  13.971   1.390  1.00 26.54
ATOM     24  OE1 GLU   159      63.649  14.929   1.115  1.00 30.85
ATOM     25  OE2 GLU   159      65.649  14.027   1.268  1.00 28.35
ATOM     26  C   GLU   159      61.549  13.520   4.909  1.00 23.26
ATOM     27  O   GLU   159      60.906  12.765   5.643  1.00 26.86
ATOM     28  N   PRO   160      61.200  14.806   4.729  1.00 22.72
ATOM     29  CD  PRO   160      61.981  15.916   4.153  1.00 17.87
ATOM     30  CA  PRO   160      59.969  15.292   5.359  1.00 19.90
ATOM     31  CB  PRO   160      60.004  16.799   5.070  1.00 14.42
ATOM     32  CG  PRO   160      61.465  17.109   4.919  1.00 12.87
ATOM     33  C   PRO   160      58.747  14.623   4.701  1.00 23.68
ATOM     34  O   PRO   160      58.730  14.383   3.491  1.00 24.72
ATOM     35  N   THR   161      57.749  14.281   5.506  1.00 22.19
ATOM     36  CA  THR   161      56.542  13.660   4.985  1.00 19.50
ATOM     37  CB  THR   161      55.691  13.031   6.125  1.00 21.50
ATOM     38  OG1 THR   161      55.163  14.062   6.972  1.00 20.33
ATOM     39  CG2 THR   161      56.537  12.078   6.959  1.00 19.48
ATOM     40  C   THR   161      55.744  14.765   4.298  1.00 22.86
ATOM     41  O   THR   161      56.040  15.949   4.481  1.00 27.68
ATOM     42  N   PRO   162      54.720  14.403   3.504  1.00 20.36
ATOM     43  CD  PRO   162      54.280  13.050   3.113  1.00 16.55
ATOM     44  CA  PRO   162      53.924  15.435   2.830  1.00 21.97
ATOM     45  CB  PRO   162      52.780  14.633   2.210  1.00 18.17
ATOM     46  CG  PRO   162      53.422  13.316   1.905  1.00 18.01
ATOM     47  C   PRO   162      53.399  16.467   3.826  1.00 22.56
ATOM     48  O   PRO   162      53.461  17.675   3.567  1.00 21.73
ATOM     49  N   GLU   163      52.912  15.976   4.967  1.00 25.28
ATOM     50  CA  GLU   163      52.357  16.816   6.030  1.00 26.64
ATOM     51  CB  GLU   163      51.743  15.962   7.144  1.00 30.22
```

```
ATOM   52  CG  GLU   163      50.514  15.131   6.748  1.00 44.99
ATOM   53  CD  GLU   163      50.836  13.950   5.831  1.00 48.88
ATOM   54  OE1 GLU   163      50.016  13.660   4.929  1.00 52.48
ATOM   55  OE2 GLU   163      51.895  13.309   6.015  1.00 44.23
ATOM   56  C   GLU   163      53.414  17.731   6.634  1.00 27.65
ATOM   57  O   GLU   163      53.114  18.862   7.034  1.00 29.30
ATOM   58  N   GLU   164      54.646  17.235   6.712  1.00 21.89
ATOM   59  CA  GLU   164      55.741  18.015   7.265  1.00 18.29
ATOM   60  CB  GLU   164      56.901  17.109   7.657  1.00 14.78
ATOM   61  CG  GLU   164      56.552  16.196   8.825  1.00 21.11
ATOM   62  CD  GLU   164      57.669  15.249   9.198  1.00 20.35
ATOM   63  OE1 GLU   164      58.605  15.071   8.392  1.00 28.55
ATOM   64  OE2 GLU   164      57.610  14.677  10.302  1.00 28.25
ATOM   65  C   GLU   164      56.200  19.097   6.306  1.00 24.62
ATOM   66  O   GLU   164      56.574  20.183   6.741  1.00 32.05
ATOM   67  N   TRP   165      56.174  18.817   5.003  1.00 28.22
ATOM   68  CA  TRP   165      56.576  19.825   4.021  1.00 22.99
ATOM   69  CB  TRP   165      56.575  19.262   2.605  1.00 17.37
ATOM   70  CG  TRP   165      57.876  18.633   2.210  1.00 10.74
ATOM   71  CD2 TRP   165      59.153  19.283   2.109  1.00 11.74
ATOM   72  CE2 TRP   165      60.075  18.319   1.648  1.00  9.97
ATOM   73  CE3 TRP   165      59.606  20.583   2.365  1.00 13.88
ATOM   74  CD1 TRP   165      58.074  17.343   1.832  1.00  9.17
ATOM   75  NE1 TRP   165      59.390  17.145   1.486  1.00 16.55
ATOM   76  CZ2 TRP   165      61.427  18.613   1.436  1.00 13.37
ATOM   77  CZ3 TRP   165      60.954  20.874   2.156  1.00 16.15
ATOM   78  CH2 TRP   165      61.846  19.892   1.696  1.00 17.42
ATOM   79  C   TRP   165      55.634  21.015   4.115  1.00 21.44
ATOM   80  O   TRP   165      56.041  22.149   3.865  1.00 22.12
ATOM   81  N   ASP   166      54.373  20.747   4.456  1.00 21.29
ATOM   82  CA  ASP   166      53.369  21.796   4.621  1.00 25.77
ATOM   83  CB  ASP   166      51.972  21.196   4.808  1.00 26.02
ATOM   84  CG  ASP   166      51.428  20.559   3.539  1.00 33.01
ATOM   85  OD1 ASP   166      51.874  20.932   2.434  1.00 29.48
ATOM   86  OD2 ASP   166      50.537  19.692   3.649  1.00 34.47
ATOM   87  C   ASP   166      53.732  22.637   5.842  1.00 27.91
ATOM   88  O   ASP   166      53.744  23.865   5.767  1.00 31.28
ATOM   89  N   LEU   167      54.046  21.966   6.951  1.00 25.57
ATOM   90  CA  LEU   167      54.439  22.640   8.187  1.00 28.28
ATOM   91  CB  LEU   167      54.854  21.624   9.256  1.00 32.80
ATOM   92  CG  LEU   167      53.945  21.347  10.455  1.00 41.75
ATOM   93  CD1 LEU   167      54.765  20.640  11.532  1.00 39.15
ATOM   94  CD2 LEU   167      53.374  22.647  11.008  1.00 39.20
ATOM   95  C   LEU   167      55.636  23.532   7.902  1.00 22.19
ATOM   96  O   LEU   167      55.671  24.700   8.302  1.00 29.51
ATOM   97  N   ILE   168      56.610  22.957   7.206  1.00 15.01
ATOM   98  CA  ILE   168      57.846  23.632   6.833  1.00 18.03
```

```
ATOM   99  CB  ILE  168     58.756  22.668   6.040  1.00 11.37
ATOM  100  CG2 ILE  168     59.890  23.413   5.367  1.00 16.36
ATOM  101  CG1 ILE  168     59.289  21.580   6.975  1.00 21.63
ATOM  102  CD1 ILE  168     60.095  20.501   6.287  1.00 21.03
ATOM  103  C   ILE  168     57.579  24.897   6.022  1.00 22.54
ATOM  104  O   ILE  168     58.155  25.948   6.300  1.00 24.88
ATOM  105  N   HIS  169     56.682  24.800   5.045  1.00 25.70
ATOM  106  CA  HIS  169     56.337  25.934   4.190  1.00 21.28
ATOM  107  CB  HIS  169     55.411  25.493   3.057  1.00 22.29
ATOM  108  CG  HIS  169     56.047  24.543   2.091  1.00 23.11
ATOM  109  CD2 HIS  169     57.348  24.265   1.839  1.00 16.86
ATOM  110  ND1 HIS  169     55.312  23.721   1.263  1.00 25.30
ATOM  111  CE1 HIS  169     56.130  22.974   0.546  1.00 15.89
ATOM  112  NE2 HIS  169     57.371  23.283   0.878  1.00 25.38
ATOM  113  C   HIS  169     55.664  27.048   4.976  1.00 18.32
ATOM  114  O   HIS  169     56.033  28.215   4.842  1.00 21.53
ATOM  115  N   VAL  170     54.679  26.685   5.795  1.00 17.13
ATOM  116  CA  VAL  170     53.957  27.661   6.607  1.00 21.29
ATOM  117  CB  VAL  170     52.808  26.991   7.399  1.00 24.33
ATOM  118  CG1 VAL  170     52.164  27.985   8.354  1.00 23.78
ATOM  119  CG2 VAL  170     51.760  26.439   6.435  1.00 18.87
ATOM  120  C   VAL  170     54.910  28.382   7.567  1.00 24.69
ATOM  121  O   VAL  170     54.912  29.616   7.637  1.00 28.77
ATOM  122  N   ALA  171     55.759  27.609   8.245  1.00 20.35
ATOM  123  CA  ALA  171     56.722  28.148   9.202  1.00 19.61
ATOM  124  CB  ALA  171     57.393  27.013   9.977  1.00 17.52
ATOM  125  C   ALA  171     57.775  29.026   8.531  1.00 20.91
ATOM  126  O   ALA  171     58.102  30.105   9.041  1.00 21.98
ATOM  127  N   THR  172     58.308  28.571   7.398  1.00 18.94
ATOM  128  CA  THR  172     59.313  29.342   6.668  1.00 19.55
ATOM  129  CB  THR  172     59.820  28.594   5.413  1.00 20.49
ATOM  130  OG1 THR  172     60.394  27.336   5.795  1.00 20.66
ATOM  131  CG2 THR  172     60.894  29.418   4.702  1.00 20.44
ATOM  132  C   THR  172     58.730  30.697   6.254  1.00 23.26
ATOM  133  O   THR  172     59.403  31.724   6.334  1.00 24.32
ATOM  134  N   GLU  173     57.468  30.694   5.836  1.00 27.42
ATOM  135  CA  GLU  173     56.797  31.922   5.434  1.00 27.68
ATOM  136  CB  GLU  173     55.477  31.605   4.728  1.00 24.51
ATOM  137  CG  GLU  173     54.652  32.836   4.338  1.00 39.69
ATOM  138  CD  GLU  173     55.396  33.814   3.426  1.00 47.72
ATOM  139  OE1 GLU  173     55.019  35.009   3.417  1.00 48.26
ATOM  140  OE2 GLU  173     56.344  33.398   2.717  1.00 49.61
ATOM  141  C   GLU  173     56.557  32.834   6.641  1.00 25.68
ATOM  142  O   GLU  173     56.773  34.046   6.559  1.00 23.39
ATOM  143  N   ALA  174     56.119  32.245   7.755  1.00 25.19
ATOM  144  CA  ALA  174     55.863  32.989   8.993  1.00 22.25
ATOM  145  CB  ALA  174     55.450  32.030  10.111  1.00 15.95
```

ATOM 146 C ALA 174 57.125 33.747 9.391 1.00 23.22
ATOM 147 O ALA 174 57.076 34.918 9.768 1.00 24.52
ATOM 148 N HIS 175 58.261 33.073 9.275 1.00 20.97
ATOM 149 CA HIS 175 59.544 33.665 9.606 1.00 19.55
ATOM 150 CB HIS 175 60.625 32.577 9.649 1.00 16.19
ATOM 151 CG HIS 175 62.016 33.104 9.835 1.00 18.89
ATOM 152 CD2 HIS 175 63.148 32.901 9.119 1.00 16.05
ATOM 153 ND1 HIS 175 62.359 33.962 10.859 1.00 13.83
ATOM 154 CE1 HIS 175 63.642 34.265 10.765 1.00 15.87
ATOM 155 NE2 HIS 175 64.143 33.635 9.718 1.00 19.19
ATOM 156 C HIS 175 59.934 34.757 8.617 1.00 21.28
ATOM 157 O HIS 175 60.274 35.869 9.014 1.00 25.12
ATOM 158 N ARG 176 59.891 34.436 7.329 1.00 26.73
ATOM 159 CA ARG 176 60.266 35.387 6.292 1.00 27.13
ATOM 160 CB ARG 176 60.156 34.748 4.914 1.00 36.00
ATOM 161 CG ARG 176 61.286 33.795 4.602 1.00 43.20
ATOM 162 CD ARG 176 61.197 33.334 3.170 1.00 50.07
ATOM 163 NE ARG 176 62.316 32.477 2.813 1.00 58.20
ATOM 164 CZ ARG 176 62.266 31.548 1.867 1.00 67.22
ATOM 165 NH1 ARG 176 61.143 31.358 1.182 1.00 67.62
ATOM 166 NH2 ARG 176 63.336 30.806 1.612 1.00 70.56
ATOM 167 C ARG 176 59.487 36.688 6.325 1.00 23.97
ATOM 168 O ARG 176 60.073 37.760 6.209 1.00 24.52
ATOM 169 N SER 177 58.177 36.598 6.515 1.00 23.60
ATOM 170 CA SER 177 57.341 37.789 6.565 1.00 26.36
ATOM 171 CB SER 177 55.865 37.407 6.439 1.00 21.93
ATOM 172 OG SER 177 55.495 36.459 7.423 1.00 25.97
ATOM 173 C SER 177 57.557 38.623 7.829 1.00 28.76
ATOM 174 O SER 177 57.084 39.761 7.907 1.00 33.09
ATOM 175 N THR 178 58.257 38.062 8.815 1.00 25.52
ATOM 176 CA THR 178 58.508 38.772 10.064 1.00 18.93
ATOM 177 CB THR 178 57.828 38.064 11.258 1.00 21.81
ATOM 178 OG1 THR 178 58.348 36.736 11.394 1.00 24.18
ATOM 179 CG2 THR 178 56.330 37.971 11.032 1.00 13.81
ATOM 180 C THR 178 59.993 38.967 10.358 1.00 20.69
ATOM 181 O THR 178 60.373 39.407 11.448 1.00 20.56
ATOM 182 N ASN 179 60.837 38.645 9.385 1.00 23.68
ATOM 183 CA ASN 179 62.275 38.802 9.555 1.00 28.22
ATOM 184 CB ASN 179 63.022 37.627 8.927 1.00 27.45
ATOM 185 CG ASN 179 64.460 37.529 9.402 1.00 33.98
ATOM 186 OD1 ASN 179 65.342 37.131 8.644 1.00 42.72
ATOM 187 ND2 ASN 179 64.702 37.865 10.667 1.00 31.14
ATOM 188 C ASN 179 62.689 40.115 8.902 1.00 34.47
ATOM 189 O ASN 179 62.832 40.200 7.678 1.00 36.54
ATOM 190 N ALA 180 62.874 41.135 9.735 1.00 37.39
ATOM 191 CA ALA 180 63.235 42.479 9.292 1.00 33.71
ATOM 192 CB ALA 180 63.555 43.352 10.494 1.00 31.57

```
ATOM   193  C   ALA  180      64.375  42.545   8.284  1.00 37.87
ATOM   194  O   ALA  180      65.458  42.018   8.525  1.00 35.26
ATOM   195  N   GLN  181      64.095  43.187   7.150  1.00 40.55
ATOM   196  CA  GLN  181      65.049  43.391   6.057  1.00 42.95
ATOM   197  CB  GLN  181      66.344  44.043   6.570  1.00 45.47
ATOM   198  CG  GLN  181      66.144  45.326   7.383  1.00 52.70
ATOM   199  CD  GLN  181      65.351  46.399   6.650  1.00 55.03
ATOM   200  OE1 GLN  181      65.270  46.412   5.421  1.00 59.56
ATOM   201  NE2 GLN  181      64.757  47.308   7.411  1.00 54.39
ATOM   202  C   GLN  181      65.391  42.176   5.197  1.00 44.27
ATOM   203  O   GLN  181      66.181  42.291   4.251  1.00 46.47
ATOM   204  N   GLY  182      64.797  41.025   5.508  1.00 42.17
ATOM   205  CA  GLY  182      65.054  39.815   4.742  1.00 42.63
ATOM   206  C   GLY  182      66.522  39.584   4.427  1.00 47.40
ATOM   207  O   GLY  182      67.382  39.691   5.306  1.00 49.38
ATOM   208  N   SER  183      66.816  39.297   3.163  1.00 49.46
ATOM   209  CA  SER  183      68.189  39.061   2.733  1.00 54.13
ATOM   210  CB  SER  183      68.208  38.225   1.449  1.00 55.08
ATOM   211  OG  SER  183      67.197  38.647   0.546  1.00 63.54
ATOM   212  C   SER  183      68.949  40.369   2.532  1.00 54.84
ATOM   213  O   SER  183      70.175  40.373   2.407  1.00 56.90
ATOM   214  N   HIS  184      68.223  41.482   2.535  1.00 55.77
ATOM   215  CA  HIS  184      68.854  42.775   2.342  1.00 57.78
ATOM   216  C   HIS  184      69.605  43.296   3.556  1.00 59.09
ATOM   217  O   HIS  184      70.312  44.301   3.454  1.00 60.34
ATOM   218  N   TRP  185      69.502  42.597   4.686  1.00 55.60
ATOM   219  CA  TRP  185      70.159  43.020   5.923  1.00 53.73
ATOM   220  CB  TRP  185      69.973  41.973   7.030  1.00 50.40
ATOM   221  CG  TRP  185      70.746  40.694   6.837  1.00 48.09
ATOM   222  CD2 TRP  185      72.091  40.419   7.269  1.00 47.38
ATOM   223  CE2 TRP  185      72.390  39.094   6.888  1.00 40.29
ATOM   224  CE3 TRP  185      73.071  41.169   7.937  1.00 45.43
ATOM   225  CD1 TRP  185      70.301  39.554   6.234  1.00 49.87
ATOM   226  NE1 TRP  185      71.280  38.589   6.262  1.00 48.02
ATOM   227  CZ2 TRP  185      73.628  38.496   7.154  1.00 38.65
ATOM   228  CZ3 TRP  185      74.304  40.573   8.201  1.00 43.26
ATOM   229  CH2 TRP  185      74.570  39.250   7.807  1.00 40.00
ATOM   230  C   TRP  185      71.638  43.386   5.800  1.00 55.99
ATOM   231  O   TRP  185      72.089  44.359   6.401  1.00 52.84
ATOM   232  N   LYS  186      72.389  42.614   5.021  1.00 59.15
ATOM   233  CA  LYS  186      73.818  42.863   4.843  1.00 64.01
ATOM   234  CB  LYS  186      74.466  41.688   4.091  1.00 64.67
ATOM   235  CG  LYS  186      75.943  41.868   3.729  1.00 65.58
ATOM   236  CD  LYS  186      76.817  42.181   4.946  1.00 62.03
ATOM   237  CE  LYS  186      78.238  42.512   4.515  1.00 61.52
ATOM   238  NZ  LYS  186      78.988  43.243   5.579  1.00 61.67
ATOM   239  C   LYS  186      74.131  44.203   4.160  1.00 67.49
```

ATOM 240 O LYS 186 75.164 44.816 4.432 1.00 68.66
ATOM 241 N GLN 187 73.221 44.678 3.316 1.00 68.99
ATOM 242 CA GLN 187 73.431 45.939 2.612 1.00 69.65
ATOM 243 CB GLN 187 72.880 45.867 1.180 1.00 73.76
ATOM 244 CG GLN 187 73.632 44.935 0.237 1.00 78.61
ATOM 245 CD GLN 187 73.368 43.471 0.525 1.00 84.96
ATOM 246 OE1 GLN 187 74.203 42.782 1.109 1.00 87.73
ATOM 247 NE2 GLN 187 72.197 42.989 0.122 1.00 84.98
ATOM 248 C GLN 187 72.817 47.141 3.323 1.00 69.16
ATOM 249 O GLN 187 73.379 48.235 3.299 1.00 71.39
ATOM 250 N ARG 188 71.666 46.936 3.953 1.00 65.82
ATOM 251 CA ARG 188 70.961 48.014 4.639 1.00 65.00
ATOM 252 CB ARG 188 69.458 47.739 4.591 1.00 66.20
ATOM 253 CG ARG 188 68.957 47.483 3.181 1.00 70.30
ATOM 254 CD ARG 188 67.463 47.212 3.132 1.00 78.59
ATOM 255 NE ARG 188 67.003 47.008 1.760 1.00 87.71
ATOM 256 CZ ARG 188 67.011 47.946 0.814 1.00 94.10
ATOM 257 NH1 ARG 188 67.453 49.171 1.081 1.00 97.26
ATOM 258 NH2 ARG 188 66.589 47.657 -0.409 1.00 94.07
ATOM 259 C ARG 188 71.409 48.286 6.077 1.00 65.39
ATOM 260 O ARG 188 70.900 49.201 6.727 1.00 65.20
ATOM 261 N ARG 189 72.372 47.506 6.561 1.00 64.28
ATOM 262 CA ARG 189 72.882 47.654 7.922 1.00 60.75
ATOM 263 CB ARG 189 73.691 46.409 8.321 1.00 56.87
ATOM 264 CG ARG 189 75.050 46.308 7.630 1.00 59.52
ATOM 265 CD ARG 189 75.580 44.891 7.589 1.00 55.86
ATOM 266 NE ARG 189 75.874 44.348 8.907 1.00 55.48
ATOM 267 CZ ARG 189 77.055 43.849 9.257 1.00 61.38
ATOM 268 NH1 ARG 189 78.057 43.832 8.388 1.00 62.54
ATOM 269 NH2 ARG 189 77.225 43.328 10.465 1.00 62.20
ATOM 270 C ARG 189 73.747 48.907 8.082 1.00 60.91
ATOM 271 O ARG 189 74.548 49.245 7.207 1.00 60.67
ATOM 272 N LYS 190 73.575 49.591 9.207 1.00 59.06
ATOM 273 CA LYS 190 74.340 50.790 9.521 1.00 55.00
ATOM 274 CB LYS 190 73.423 52.008 9.582 1.00 55.45
ATOM 275 C LYS 190 74.991 50.542 10.875 1.00 51.52
ATOM 276 O LYS 190 74.320 50.144 11.830 1.00 51.68
ATOM 277 N PHE 191 76.304 50.721 10.944 1.00 50.49
ATOM 278 CA PHE 191 77.037 50.508 12.186 1.00 50.17
ATOM 279 CB PHE 191 78.546 50.571 11.943 1.00 48.38
ATOM 280 CG PHE 191 79.090 49.423 11.142 1.00 49.66
ATOM 281 CD1 PHE 191 78.873 49.348 9.768 1.00 51.03
ATOM 282 CD2 PHE 191 79.845 48.429 11.759 1.00 46.28
ATOM 283 CE1 PHE 191 79.403 48.298 9.018 1.00 51.35
ATOM 284 CE2 PHE 191 80.379 47.377 11.021 1.00 47.26
ATOM 285 CZ PHE 191 80.158 47.311 9.646 1.00 48.48
ATOM 286 C PHE 191 76.663 51.534 13.248 1.00 48.61

ATOM 287 O PHE 191 76.507 52.720 12.952 1.00 50.38
ATOM 288 N LEU 192 76.488 51.068 14.479 1.00 47.31
ATOM 289 CA LEU 192 76.169 51.958 15.584 1.00 42.72
ATOM 290 CB LEU 192 75.845 51.151 16.844 1.00 36.66
ATOM 291 CG LEU 192 75.397 51.949 18.068 1.00 31.01
ATOM 292 CD1 LEU 192 74.048 52.590 17.786 1.00 28.37
ATOM 293 CD2 LEU 192 75.318 51.043 19.289 1.00 29.60
ATOM 294 C LEU 192 77.447 52.760 15.800 1.00 42.28
ATOM 295 O LEU 192 78.528 52.179 15.932 1.00 39.71
ATOM 296 N PRO 193 77.350 54.104 15.781 1.00 45.15
ATOM 297 CD PRO 193 76.095 54.865 15.617 1.00 43.82
ATOM 298 CA PRO 193 78.493 55.006 15.973 1.00 43.14
ATOM 299 CB PRO 193 77.820 56.306 16.400 1.00 44.37
ATOM 300 CG PRO 193 76.571 56.308 15.565 1.00 41.66
ATOM 301 C PRO 193 79.476 54.498 17.028 1.00 43.34
ATOM 302 O PRO 193 79.103 54.296 18.182 1.00 45.18
ATOM 303 N ASP 194 80.732 54.317 16.628 1.00 44.22
ATOM 304 CA ASP 194 81.781 53.804 17.512 1.00 47.20
ATOM 305 CB ASP 194 83.108 53.732 16.761 1.00 41.89
ATOM 306 C ASP 194 81.962 54.511 18.866 1.00 51.99
ATOM 307 O ASP 194 82.636 53.986 19.752 1.00 54.04
ATOM 308 N ASP 195 81.381 55.698 19.025 1.00 55.21
ATOM 309 CA ASP 195 81.489 56.428 20.288 1.00 57.50
ATOM 310 CB ASP 195 81.423 57.948 20.061 1.00 60.04
ATOM 311 CG ASP 195 80.123 58.398 19.406 1.00 68.39
ATOM 312 OD1 ASP 195 79.211 58.847 20.136 1.00 69.46
ATOM 313 OD2 ASP 195 80.020 58.322 18.162 1.00 72.91
ATOM 314 C ASP 195 80.410 55.976 21.280 1.00 58.05
ATOM 315 O ASP 195 80.540 56.180 22.491 1.00 58.97
ATOM 316 N ILE 196 79.349 55.363 20.759 1.00 56.06
ATOM 317 CA ILE 196 78.247 54.863 21.580 1.00 50.48
ATOM 318 CB ILE 196 76.930 54.762 20.766 1.00 45.82
ATOM 319 CG2 ILE 196 75.818 54.166 21.621 1.00 44.04
ATOM 320 CG1 ILE 196 76.517 56.147 20.261 1.00 44.27
ATOM 321 CD1 ILE 196 75.179 56.171 19.541 1.00 45.25
ATOM 322 C ILE 196 78.603 53.484 22.135 1.00 47.66
ATOM 323 O ILE 196 79.138 52.636 21.419 1.00 43.96
ATOM 324 N GLY 197 78.309 53.269 23.414 1.00 46.29
ATOM 325 CA GLY 197 78.608 51.995 24.045 1.00 48.03
ATOM 326 C GLY 197 79.978 51.963 24.692 1.00 50.42
ATOM 327 O GLY 197 80.463 50.902 25.070 1.00 46.66
ATOM 328 N GLN 198 80.583 53.137 24.854 1.00 56.94
ATOM 329 CA GLN 198 81.910 53.259 25.454 1.00 59.51
ATOM 330 CB GLN 198 82.751 54.257 24.649 1.00 62.53
ATOM 331 CG GLN 198 83.232 53.718 23.316 1.00 69.39
ATOM 332 CD GLN 198 84.088 52.484 23.483 1.00 76.76
ATOM 333 OE1 GLN 198 83.745 51.399 22.996 1.00 81.73

ATOM 334 NE2 GLN 198 85.205 52.632 24.192 1.00 78.09
ATOM 335 C GLN 198 81.915 53.678 26.922 1.00 57.56
ATOM 336 O GLN 198 82.946 53.584 27.588 1.00 57.71
ATOM 337 N SER 199 80.770 54.128 27.425 1.00 54.11
ATOM 338 CA SER 199 80.676 54.600 28.800 1.00 46.28
ATOM 339 CB SER 199 80.243 56.067 28.777 1.00 50.28
ATOM 340 OG SER 199 80.935 56.776 27.757 1.00 50.95
ATOM 341 C SER 199 79.776 53.805 29.757 1.00 40.19
ATOM 342 O SER 199 78.680 54.252 30.102 1.00 39.26
ATOM 343 N PRO 200 80.236 52.629 30.214 1.00 35.63
ATOM 344 CD PRO 200 81.530 52.011 29.904 1.00 34.88
ATOM 345 CA PRO 200 79.464 51.789 31.139 1.00 37.54
ATOM 346 CB PRO 200 80.223 50.457 31.124 1.00 29.86
ATOM 347 CG PRO 200 81.207 50.570 29.995 1.00 34.29
ATOM 348 C PRO 200 79.521 52.416 32.532 1.00 44.63
ATOM 349 O PRO 200 80.443 52.137 33.300 1.00 47.80
ATOM 350 N ILE 201 78.532 53.241 32.867 1.00 49.57
ATOM 351 CA ILE 201 78.525 53.924 34.158 1.00 49.15
ATOM 352 CB ILE 201 78.213 55.426 33.990 1.00 49.19
ATOM 353 CG2 ILE 201 78.429 56.150 35.306 1.00 53.37
ATOM 354 CG1 ILE 201 79.137 56.037 32.934 1.00 52.55
ATOM 355 CD1 ILE 201 78.811 57.471 32.586 1.00 55.26
ATOM 356 C ILE 201 77.625 53.352 35.254 1.00 49.88
ATOM 357 O ILE 201 78.044 53.250 36.408 1.00 50.20
ATOM 358 N VAL 202 76.384 53.014 34.920 1.00 47.85
ATOM 359 CA VAL 202 75.468 52.474 35.927 1.00 45.76
ATOM 360 CB VAL 202 74.015 52.415 35.400 1.00 39.98
ATOM 361 CG1 VAL 202 73.072 51.896 36.482 1.00 35.94
ATOM 362 CG2 VAL 202 73.574 53.799 34.944 1.00 29.43
ATOM 363 C VAL 202 75.954 51.093 36.373 1.00 50.57
ATOM 364 O VAL 202 76.296 50.249 35.545 1.00 49.50
ATOM 365 N SER 203 76.009 50.876 37.683 1.00 54.82
ATOM 366 CA SER 203 76.490 49.609 38.223 1.00 59.26
ATOM 367 CB SER 203 77.067 49.809 39.628 1.00 64.88
ATOM 368 OG SER 203 76.127 50.428 40.492 1.00 75.47
ATOM 369 C SER 203 75.457 48.491 38.244 1.00 55.78
ATOM 370 O SER 203 74.285 48.712 38.544 1.00 57.50
ATOM 371 N MET 204 75.923 47.283 37.958 1.00 52.29
ATOM 372 CA MET 204 75.076 46.103 37.948 1.00 50.42
ATOM 373 CB MET 204 75.032 45.487 36.548 1.00 47.74
ATOM 374 CG MET 204 74.243 46.297 35.541 1.00 43.40
ATOM 375 SD MET 204 72.491 46.348 35.953 1.00 40.93
ATOM 376 CE MET 204 71.947 44.785 35.241 1.00 39.19
ATOM 377 C MET 204 75.670 45.107 38.925 1.00 49.42
ATOM 378 O MET 204 76.892 45.020 39.062 1.00 52.25
ATOM 379 N PRO 205 74.816 44.329 39.605 1.00 47.73
ATOM 380 CD PRO 205 73.344 44.414 39.549 1.00 48.94

```
ATOM   381  CA  PRO  205      75.250  43.326  40.580  1.00 47.34
ATOM   382  CB  PRO  205      73.982  42.513  40.810  1.00 49.44
ATOM   383  CG  PRO  205      72.907  43.562  40.725  1.00 50.62
ATOM   384  C   PRO  205      76.431  42.442  40.168  1.00 47.12
ATOM   385  O   PRO  205      77.299  42.160  40.990  1.00 51.21
ATOM   386  N   ASP  206      76.487  42.023  38.909  1.00 48.81
ATOM   387  CA  ASP  206      77.583  41.160  38.465  1.00 49.88
ATOM   388  CB  ASP  206      77.128  40.223  37.330  1.00 54.06
ATOM   389  CG  ASP  206      76.598  40.967  36.107  1.00 57.34
ATOM   390  OD1 ASP  206      77.056  42.095  35.811  1.00 52.21
ATOM   391  OD2 ASP  206      75.719  40.397  35.423  1.00 59.16
ATOM   392  C   ASP  206      78.902  41.843  38.093  1.00 48.70
ATOM   393  O   ASP  206      79.862  41.171  37.715  1.00 49.75
ATOM   394  N   GLY  207      78.946  43.168  38.161  1.00 47.54
ATOM   395  CA  GLY  207      80.174  43.869  37.820  1.00 49.23
ATOM   396  C   GLY  207      80.169  44.585  36.482  1.00 51.96
ATOM   397  O   GLY  207      80.783  45.645  36.348  1.00 56.32
ATOM   398  N   ASP  208      79.510  44.005  35.481  1.00 52.50
ATOM   399  CA  ASP  208      79.435  44.624  34.157  1.00 48.00
ATOM   400  CB  ASP  208      78.968  43.609  33.115  1.00 53.23
ATOM   401  CG  ASP  208      80.038  42.592  32.774  1.00 53.17
ATOM   402  OD1 ASP  208      81.130  43.006  32.335  1.00 57.42
ATOM   403  OD2 ASP  208      79.787  41.380  32.942  1.00 55.64
ATOM   404  C   ASP  208      78.497  45.823  34.187  1.00 46.68
ATOM   405  O   ASP  208      77.283  45.671  34.332  1.00 45.81
ATOM   406  N   LYS  209      79.075  47.014  34.077  1.00 45.95
ATOM   407  CA  LYS  209      78.313  48.257  34.115  1.00 45.87
ATOM   408  CB  LYS  209      79.235  49.418  34.478  1.00 46.90
ATOM   409  C   LYS  209      77.561  48.546  32.812  1.00 41.17
ATOM   410  O   LYS  209      77.951  48.074  31.745  1.00 39.51
ATOM   411  N   VAL  210      76.500  49.344  32.916  1.00 39.35
ATOM   412  CA  VAL  210      75.652  49.713  31.782  1.00 38.03
ATOM   413  CB  VAL  210      74.136  49.584  32.140  1.00 32.13
ATOM   414  CG1 VAL  210      73.269  49.926  30.937  1.00 27.92
ATOM   415  CG2 VAL  210      73.818  48.183  32.627  1.00 29.43
ATOM   416  C   VAL  210      75.895  51.134  31.263  1.00 38.68
ATOM   417  O   VAL  210      76.090  52.079  32.038  1.00 39.57
ATOM   418  N   ASP  211      75.848  51.272  29.942  1.00 39.19
ATOM   419  CA  ASP  211      76.019  52.544  29.254  1.00 38.39
ATOM   420  CB  ASP  211      76.794  52.327  27.946  1.00 40.36
ATOM   421  CG  ASP  211      77.051  53.620  27.177  1.00 36.85
ATOM   422  OD1 ASP  211      76.193  54.528  27.167  1.00 37.95
ATOM   423  OD2 ASP  211      78.121  53.716  26.553  1.00 33.87
ATOM   424  C   ASP  211      74.601  53.040  28.958  1.00 40.60
ATOM   425  O   ASP  211      73.919  52.517  28.073  1.00 40.36
ATOM   426  N   LEU  212      74.185  54.074  29.680  1.00 41.55
ATOM   427  CA  LEU  212      72.854  54.664  29.552  1.00 38.39
```

ATOM 428 CB LEU 212 72.759 55.883 30.467 1.00 40.93
ATOM 429 CG LEU 212 71.575 55.979 31.428 1.00 45.32
ATOM 430 CD1 LEU 212 71.271 54.626 32.047 1.00 43.83
ATOM 431 CD2 LEU 212 71.900 57.007 32.502 1.00 44.93
ATOM 432 C LEU 212 72.448 55.050 28.133 1.00 37.61
ATOM 433 O- LEU 212 71.318 54.805 27.719 1.00 33.71
ATOM 434 N GLU 213 73.360 55.670 27.393 1.00 41.23
ATOM 435 CA GLU 213 73.068 56.084 26.023 1.00 43.48
ATOM 436 CB GLU 213 74.181 56.986 25.481 1.00 47.66
ATOM 437 CG GLU 213 73.919 57.494 24.065 1.00 56.87
ATOM 438 CD GLU 213 75.121 58.180 23.433 1.00 60.87
ATOM 439 OE1 GLU 213 76.258 57.996 23.924 1.00 60.37
ATOM 440 OE2 GLU 213 74.921 58.894 22.423 1.00 61.13
ATOM 441 C GLU 213 72.889 54.880 25.102 1.00 39.29
ATOM 442 O GLU 213 71.965 54.841 24.290 1.00 36.66
ATOM 443 N ALA 214 73.785 53.906 25.233 1.00 36.33
ATOM 444 CA ALA 214 73.739 52.693 24.422 1.00 34.89
ATOM 445 CB ALA 214 74.946 51.817 24.711 1.00 30.70
ATOM 446 C ALA 214 72.454 51.938 24.718 1.00 31.96
ATOM 447 O ALA 214 71.739 51.523 23.804 1.00 33.93
ATOM 448 N PHE 215 72.151 51.798 26.003 1.00 28.47
ATOM 449 CA PHE 215 70.947 51.116 26.445 1.00 29.74
ATOM 450 CB PHE 215 70.819 51.223 27.962 1.00 23.73
ATOM 451 CG PHE 215 69.589 50.568 28.515 1.00 22.71
ATOM 452 CD1 PHE 215 69.603 49.220 28.858 1.00 22.53
ATOM 453 CD2 PHE 215 68.423 51.301 28.712 1.00 19.74
ATOM 454 CE1 PHE 215 68.477 48.606 29.391 1.00 20.75
ATOM 455 CE2 PHE 215 67.290 50.698 29.245 1.00 21.02
ATOM 456 CZ PHE 215 67.318 49.346 29.586 1.00 19.50
ATOM 457 C PHE 215 69.730 51.742 25.771 1.00 34.64
ATOM 458 O PHE 215 68.872 51.034 25.239 1.00 39.86
ATOM 459 N SER 216 69.677 53.071 25.771 1.00 34.78
ATOM 460 CA SER 216 68.572 53.801 25.160 1.00 36.01
ATOM 461 CB SER 216 68.762 55.302 25.366 1.00 37.36
ATOM 462 OG SER 216 67.537 55.987 25.193 1.00 48.33
ATOM 463 C SER 216 68.458 53.475 23.664 1.00 37.06
ATOM 464 O SER 216 67.358 53.250 23.148 1.00 33.23
ATOM 465 N GLU 217 69.601 53.410 22.986 1.00 36.25
ATOM 466 CA GLU 217 69.645 53.091 21.562 1.00 36.99
ATOM 467 CB GLU 217 71.092 53.104 21.064 1.00 37.10
ATOM 468 CG GLU 217 71.682 54.491 20.912 1.00 44.30
ATOM 469 CD GLU 217 71.016 55.284 19.802 1.00 51.30
ATOM 470 OE1 GLU 217 71.439 55.142 18.633 1.00 57.25
ATOM 471 OE2 GLU 217 70.070 56.046 20.096 1.00 52.50
ATOM 472 C GLU 217 69.019 51.726 21.286 1.00 36.93
ATOM 473 O GLU 217 68.191 51.577 20.381 1.00 41.06
ATOM 474 N PHE 218 69.395 50.740 22.093 1.00 30.27

```
ATOM   475  CA  PHE  218      68.875  49.388  21.947  1.00 27.20
ATOM   476  CB  PHE  218      69.679  48.421  22.814  1.00 28.10
ATOM   477  CG  PHE  218      71.124  48.330  22.428  1.00 24.84
ATOM   478  CD1 PHE  218      72.117  48.286  23.398  1.00 21.78
ATOM   479  CD2 PHE  218      71.495  48.301  21.087  1.00 24.78
ATOM   480  CE1 PHE  218      73.458  48.215  23.040  1.00 24.08
ATOM   481  CE2 PHE  218      72.834  48.230  20.719  1.00 25.33
ATOM   482  CZ  PHE  218      73.818  48.187  21.697  1.00 25.04
ATOM   483  C   PHE  218      67.381  49.281  22.261  1.00 28.23
ATOM   484  O   PHE  218      66.639  48.605  21.543  1.00 33.52
ATOM   485  N   THR  219      66.927  49.961  23.310  1.00 27.24
ATOM   486  CA  THR  219      65.515  49.913  23.666  1.00 29.28
ATOM   487  CB  THR  219      65.238  50.533  25.052  1.00 30.97
ATOM   488  OG1 THR  219      65.724  51.880  25.090  1.00 35.50
ATOM   489  CG2 THR  219      65.901  49.712  26.149  1.00 30.78
ATOM   490  C   THR  219      64.660  50.612  22.615  1.00 33.29
ATOM   491  O   THR  219      63.473  50.317  22.474  1.00 36.85
ATOM   492  N   LYS  220      65.276  51.515  21.860  1.00 35.23
ATOM   493  CA  LYS  220      64.579  52.253  20.816  1.00 38.97
ATOM   494  CB  LYS  220      65.506  53.334  20.236  1.00 44.67
ATOM   495  CG  LYS  220      64.805  54.491  19.513  1.00 58.02
ATOM   496  CD  LYS  220      64.406  54.130  18.079  1.00 68.57
ATOM   497  CE  LYS  220      63.732  55.296  17.347  1.00 70.50
ATOM   498  NZ  LYS  220      62.395  55.668  17.905  1.00 66.08
ATOM   499  C   LYS  220      64.112  51.289  19.721  1.00 38.48
ATOM   500  O   LYS  220      63.021  51.446  19.173  1.00 37.18
ATOM   501  N   ILE  221      64.917  50.270  19.432  1.00 36.19
ATOM   502  CA  ILE  221      64.563  49.305  18.394  1.00 36.77
ATOM   503  CB  ILE  221      65.756  48.996  17.457  1.00 34.41
ATOM   504  CG2 ILE  221      66.270  50.276  16.814  1.00 38.54
ATOM   505  CG1 ILE  221      66.864  48.267  18.221  1.00 32.93
ATOM   506  CD1 ILE  221      67.984  47.752  17.338  1.00 31.12
ATOM   507  C   ILE  221      64.002  47.971  18.888  1.00 38.22
ATOM   508  O   ILE  221      63.499  47.181  18.089  1.00 38.90
ATOM   509  N   ILE  222      64.048  47.719  20.191  1.00 35.75
ATOM   510  CA  ILE  222      63.557  46.446  20.702  1.00 31.77
ATOM   511  CB  ILE  222      64.086  46.152  22.130  1.00 33.14
ATOM   512  CG2 ILE  222      63.203  46.813  23.183  1.00 24.60
ATOM   513  CG1 ILE  222      64.147  44.638  22.350  1.00 32.60
ATOM   514  CD1 ILE  222      64.860  44.226  23.609  1.00 34.52
ATOM   515  C   ILE  222      62.042  46.240  20.624  1.00 32.56
ATOM   516  O   ILE  222      61.581  45.109  20.452  1.00 35.74
ATOM   517  N   THR  223      61.262  47.313  20.720  1.00 29.43
ATOM   518  CA  THR  223      59.806  47.170  20.651  1.00 33.57
ATOM   519  CB  THR  223      59.075  48.514  20.903  1.00 38.99
ATOM   520  OG1 THR  223      59.422  49.010  22.205  1.00 41.23
ATOM   521  CG2 THR  223      57.558  48.325  20.836  1.00 36.98
```

```
ATOM   522  C   THR  223      59.355  46.528  19.325  1.00 31.45
ATOM   523  O   THR  223      58.571  45.571  19.334  1.00 26.77
ATOM   524  N   PRO  224      59.824  47.054  18.173  1.00 31.35
ATOM   525  CD  PRO  224      60.570  48.306  17.950  1.00 30.11
ATOM   526  CA  PRO  224      59.424  46.462  16.891  1.00 30.38
ATOM   527  CB  PRO  224      60.149  47.336  15.865  1.00 30.09
ATOM   528  CG  PRO  224      60.200  48.659  16.530  1.00 31.86
ATOM   529  C   PRO  224      59.882  45.007  16.795  1.00 29.51
ATOM   530  O   PRO  224      59.147  44.153  16.295  1.00 32.52
ATOM   531  N   ALA  225      61.090  44.734  17.285  1.00 22.63
ATOM   532  CA  ALA  225      61.650  43.385  17.268  1.00 20.88
ATOM   533  CB  ALA  225      63.046  43.386  17.862  1.00 20.57
ATOM   534  C   ALA  225      60.752  42.416  18.026  1.00 23.53
ATOM   535  O   ALA  225      60.455  41.323  17.544  1.00 25.07
ATOM   536  N   ILE  226      60.296  42.828  19.202  1.00 22.61
ATOM   537  CA  ILE  226      59.420  41.989  20.007  1.00 19.46
ATOM   538  CB  ILE  226      59.120  42.644  21.360  1.00 20.25
ATOM   539  CG2 ILE  226      58.071  41.843  22.105  1.00 16.75
ATOM   540  CG1 ILE  226      60.401  42.772  22.182  1.00 19.30
ATOM   541  CD1 ILE  226      60.240  43.645  23.413  1.00 20.92
ATOM   542  C   ILE  226      58.112  41.768  19.251  1.00 21.28
ATOM   543  O   ILE  226      57.553  40.670  19.256  1.00 23.75
ATOM   544  N   THR  227      57.629  42.821  18.598  1.00 24.46
ATOM   545  CA  THR  227      56.393  42.752  17.826  1.00 25.81
ATOM   546  CB  THR  227      56.020  44.136  17.260  1.00 31.00
ATOM   547  OG1 THR  227      55.772  45.039  18.345  1.00 35.43
ATOM   548  CG2 THR  227      54.776  44.049  16.388  1.00 29.01
ATOM   549  C   THR  227      56.508  41.728  16.691  1.00 22.85
ATOM   550  O   THR  227      55.589  40.939  16.469  1.00 22.84
ATOM   551  N   ARG  228      57.647  41.713  16.004  1.00 16.09
ATOM   552  CA  ARG  228      57.862  40.765  14.919  1.00 16.97
ATOM   553  CB  ARG  228      59.161  41.064  14.174  1.00 14.71
ATOM   554  CG  ARG  228      59.137  42.369  13.391  1.00 16.22
ATOM   555  CD  ARG  228      60.309  42.447  12.422  1.00 20.90
ATOM   556  NE  ARG  228      61.595  42.207  13.078  1.00 24.94
ATOM   557  CZ  ARG  228      62.243  43.113  13.805  1.00 35.06
ATOM   558  NH1 ARG  228      61.729  44.328  13.973  1.00 36.35
ATOM   559  NH2 ARG  228      63.404  42.807  14.370  1.00 32.78
ATOM   560  C   ARG  228      57.866  39.326  15.431  1.00 21.63
ATOM   561  O   ARG  228      57.477  38.407  14.704  1.00 24.47
ATOM   562  N   VAL  229      58.304  39.128  16.675  1.00 20.00
ATOM   563  CA  VAL  229      58.319  37.793  17.266  1.00 18.39
ATOM   564  CB  VAL  229      59.103  37.745  18.606  1.00 19.20
ATOM   565  CG1 VAL  229      58.938  36.382  19.265  1.00 14.19
ATOM   566  CG2 VAL  229      60.581  38.001  18.356  1.00 14.81
ATOM   567  C   VAL  229      56.875  37.367  17.501  1.00 20.00
ATOM   568  O   VAL  229      56.499  36.227  17.212  1.00 20.04
```

```
ATOM   569  N   VAL  230      56.058  38.291  18.003  1.00 19.60
ATOM   570  CA  VAL  230      54.651  37.996  18.247  1.00 18.72
ATOM   571  CB  VAL  230      53.930  39.185  18.912  1.00 22.15
ATOM   572  CG1 VAL  230      52.452  38.862  19.113  1.00 15.66
ATOM   573  CG2 VAL  230      54.592  39.522  20.248  1.00 21.05
ATOM   574  C   VAL  230      53.967  37.660  16.917  1.00 26.17
ATOM   575  O   VAL  230      53.188  36.704  16.836  1.00 28.01
ATOM   576  N   ASP  231      54.288  38.426  15.873  1.00 25.07
ATOM   577  CA  ASP  231      53.714  38.216  14.542  1.00 26.10
ATOM   578  CB  ASP  231      54.169  39.309  13.568  1.00 22.15
ATOM   579  CG  ASP  231      53.620  40.684  13.921  1.00 29.49
ATOM   580  OD1 ASP  231      52.587  40.767  14.624  1.00 30.93
ATOM   581  OD2 ASP  231      54.223  41.687  13.481  1.00 31.74
ATOM   582  C   ASP  231      54.087  36.842  13.989  1.00 27.35
ATOM   583  O   ASP  231      53.245  36.154  13.408  1.00 25.89
ATOM   584  N   PHE  232      55.347  36.451  14.175  1.00 24.29
ATOM   585  CA  PHE  232      55.825  35.154  13.714  1.00 22.90
ATOM   586  CB  PHE  232      57.302  34.956  14.090  1.00 20.56
ATOM   587  CG  PHE  232      57.762  33.525  14.007  1.00 24.20
ATOM   588  CD1 PHE  232      57.952  32.910  12.772  1.00 23.44
ATOM   589  CD2 PHE  232      57.959  32.776  15.167  1.00 19.41
ATOM   590  CE1 PHE  232      58.329  31.567  12.689  1.00 19.53
ATOM   591  CE2 PHE  232      58.336  31.431  15.100  1.00 21.09
ATOM   592  CZ  PHE  232      58.520  30.824  13.858  1.00 21.61
ATOM   593  C   PHE  232      54.984  34.047  14.341  1.00 24.18
ATOM   594  O   PHE  232      54.481  33.160  13.645  1.00 22.26
ATOM   595  N   ALA  233      54.810  34.127  15.656  1.00 23.90
ATOM   596  CA  ALA  233      54.048  33.128  16.397  1.00 22.60
ATOM   597  CB  ALA  233      54.088  33.435  17.890  1.00 15.34
ATOM   598  C   ALA  233      52.609  33.040  15.917  1.00 22.04
ATOM   599  O   ALA  233      52.084  31.948  15.697  1.00 22.86
ATOM   600  N   LYS  234      51.978  34.195  15.743  1.00 25.04
ATOM   601  CA  LYS  234      50.593  34.248  15.298  1.00 27.68
ATOM   602  CB  LYS  234      50.096  35.691  15.292  1.00 31.41
ATOM   603  CG  LYS  234      49.845  36.248  16.682  1.00 40.37
ATOM   604  CD  LYS  234      49.212  37.626  16.604  1.00 57.53
ATOM   605  CE  LYS  234      48.772  38.112  17.974  1.00 64.28
ATOM   606  NZ  LYS  234      48.164  39.473  17.904  1.00 67.19
ATOM   607  C   LYS  234      50.358  33.588  13.939  1.00 26.42
ATOM   608  O   LYS  234      49.269  33.067  13.674  1.00 31.34
ATOM   609  N   LYS  235      51.382  33.588  13.093  1.00 24.38
ATOM   610  CA  LYS  235      51.278  32.985  11.770  1.00 26.42
ATOM   611  CB  LYS  235      52.244  33.664  10.805  1.00 24.92
ATOM   612  CG  LYS  235      51.908  35.127  10.583  1.00 22.41
ATOM   613  CD  LYS  235      52.843  35.775   9.588  1.00 29.38
ATOM   614  CE  LYS  235      52.481  37.234   9.395  1.00 33.49
ATOM   615  NZ  LYS  235      53.354  37.869   8.376  1.00 40.13
```

```
ATOM   616  C   LYS  235      51.470  31.469  11.759  1.00 30.02
ATOM   617  O   LYS  235      51.417  30.838  10.699  1.00 30.37
ATOM   618  N   LEU  236      51.722  30.889  12.930  1.00 32.39
ATOM   619  CA  LEU  236      51.878  29.443  13.053  1.00 36.24
ATOM   620  CB  LEU  236      52.944  29.080  14.089  1.00 29.91
ATOM   621  CG  LEU  236      54.373  29.516  13.765  1.00 24.69
ATOM   622  CD1 LEU  236      55.299  29.054  14.877  1.00 22.71
ATOM   623  CD2 LEU  236      54.811  28.942  12.427  1.00 24.48
ATOM   624  C   LEU  236      50.520  28.891  13.470  1.00 41.22
ATOM   625  O   LEU  236      49.936  29.333  14.467  1.00 41.45
ATOM   626  N   PRO  237      50.012  27.895  12.729  1.00 47.86
ATOM   627  CD  PRO  237      50.739  27.190  11.657  1.00 49.32
ATOM   628  CA  PRO  237      48.713  27.262  12.992  1.00 50.28
ATOM   629  CB  PRO  237      48.669  26.128  11.962  1.00 55.25
ATOM   630  CG  PRO  237      50.135  25.818  11.706  1.00 54.08
ATOM   631  C   PRO  237      48.495  26.751  14.422  1.00 47.94
ATOM   632  O   PRO  237      47.533  27.134  15.087  1.00 42.48
ATOM   633  N   MET  238      49.415  25.927  14.906  1.00 49.51
ATOM   634  CA  MET  238      49.306  25.354  16.245  1.00 53.49
ATOM   635  CB  MET  238      50.379  24.275  16.424  1.00 52.52
ATOM   636  CG  MET  238      50.028  22.959  15.728  1.00 56.00
ATOM   637  SD  MET  238      51.443  21.961  15.204  1.00 50.16
ATOM   638  CE  MET  238      50.896  21.440  13.552  1.00 55.71
ATOM   639  C   MET  238      49.352  26.362  17.395  1.00 54.20
ATOM   640  O   MET  238      48.930  26.058  18.515  1.00 54.72
ATOM   641  N   PHE  239      49.803  27.578  17.101  1.00 50.11
ATOM   642  CA  PHE  239      49.917  28.619  18.117  1.00 41.11
ATOM   643  CB  PHE  239      51.089  29.552  17.788  1.00 34.80
ATOM   644  CG  PHE  239      51.336  30.607  18.826  1.00 30.25
ATOM   645  CD1 PHE  239      52.127  30.332  19.937  1.00 25.66
ATOM   646  CD2 PHE  239      50.786  31.878  18.690  1.00 26.30
ATOM   647  CE1 PHE  239      52.368  31.307  20.896  1.00 30.28
ATOM   648  CE2 PHE  239      51.019  32.862  19.644  1.00 30.49
ATOM   649  CZ  PHE  239      51.813  32.576  20.750  1.00 29.00
ATOM   650  C   PHE  239      48.647  29.434  18.337  1.00 35.65
ATOM   651  O   PHE  239      48.151  29.521  19.457  1.00 30.27
ATOM   652  N   SER  240      48.133  30.037  17.272  1.00 36.49
ATOM   653  CA  SER  240      46.936  30.866  17.359  1.00 36.37
ATOM   654  CB  SER  240      46.622  31.466  15.994  1.00 35.87
ATOM   655  C   SER  240      45.707  30.145  17.936  1.00 40.37
ATOM   656  O   SER  240      44.784  30.789  18.438  1.00 37.47
ATOM   657  N   GLU  241      45.713  28.814  17.889  1.00 43.00
ATOM   658  CA  GLU  241      44.605  28.004  18.404  1.00 46.31
ATOM   659  CB  GLU  241      44.714  26.566  17.881  1.00 55.84
ATOM   660  CG  GLU  241      44.750  26.422  16.360  1.00 69.03
ATOM   661  CD  GLU  241      45.141  25.015  15.900  1.00 74.99
ATOM   662  OE1 GLU  241      45.835  24.299  16.658  1.00 77.81
```

ATOM 663 OE2 GLU 241 44.765 24.629 14.770 1.00 70.58
ATOM 664 C GLU 241 44.587 27.961 19.933 1.00 42.60
ATOM 665 O GLU 241 43.541 27.740 20.545 1.00 43.23
ATOM 666 N LEU 242 45.762 28.125 20.535 1.00 39.31
ATOM 667 CA LEU 242 45.926 28.086 21.987 1.00 34.54
ATOM 668 CB LEU 242 47.417 28.109 22.344 1.00 28.35
ATOM 669 CG LEU 242 48.311 26.974 21.853 1.00 27.59
ATOM 670 CD1 LEU 242 49.750 27.307 22.180 1.00 20.72
ATOM 671 CD2 LEU 242 47.902 25.661 22.500 1.00 24.97
ATOM 672 C LEU 242 45.242 29.240 22.711 1.00 32.23
ATOM 673 O LEU 242 44.956 30.282 22.119 1.00 31.50
ATOM 674 N PRO 243 44.954 29.060 24.010 1.00 34.39
ATOM 675 CD PRO 243 45.118 27.843 24.827 1.00 31.68
ATOM 676 CA PRO 243 44.309 30.134 24.773 1.00 34.39
ATOM 677 CB PRO 243 44.092 29.498 26.154 1.00 32.34
ATOM 678 CG PRO 243 44.081 28.026 25.892 1.00 33.80
ATOM 679 C PRO 243 45.300 31.303 24.873 1.00 35.56
ATOM 680 O PRO 243 46.517 31.082 24.897 1.00 34.99
ATOM 681 N CYS 244 44.791 32.532 24.946 1.00 34.23
ATOM 682 CA CYS 244 45.648 33.714 25.062 1.00 37.03
ATOM 683 CB CYS 244 44.820 34.960 25.376 1.00 43.49
ATOM 684 SG CYS 244 43.820 35.531 24.007 1.00 71.28
ATOM 685 C CYS 244 46.716 33.555 26.135 1.00 34.99
ATOM 686 O CYS 244 47.894 33.802 25.882 1.00 37.49
ATOM 687 N GLU 245 46.305 33.125 27.326 1.00 33.03
ATOM 688 CA GLU 245 47.249 32.944 28.424 1.00 35.72
ATOM 689 CB GLU 245 46.559 32.469 29.716 1.00 37.85
ATOM 690 CG GLU 245 45.294 31.633 29.549 1.00 46.81
ATOM 691 CD GLU 245 44.029 32.478 29.480 1.00 44.81
ATOM 692 OE1 GLU 245 43.606 33.012 30.527 1.00 33.05
ATOM 693 OE2 GLU 245 43.454 32.599 28.377 1.00 48.22
ATOM 694 C GLU 245 48.414 32.035 28.047 1.00 32.29
ATOM 695 O GLU 245 49.558 32.319 28.399 1.00 35.92
ATOM 696 N ASP 246 48.134 30.975 27.295 1.00 30.64
ATOM 697 CA ASP 246 49.182 30.058 26.855 1.00 28.23
ATOM 698 CB ASP 246 48.575 28.809 26.208 1.00 30.51
ATOM 699 CG ASP 246 48.213 27.737 27.222 1.00 33.18
ATOM 700 OD1 ASP 246 48.265 28.006 28.439 1.00 31.26
ATOM 701 OD2 ASP 246 47.884 26.613 26.796 1.00 33.85
ATOM 702 C ASP 246 50.104 30.757 25.860 1.00 30.10
ATOM 703 O ASP 246 51.330 30.651 25.950 1.00 27.08
ATOM 704 N GLN 247 49.500 31.477 24.918 1.00 30.39
ATOM 705 CA GLN 247 50.249 32.208 23.901 1.00 29.08
ATOM 706 CB GLN 247 49.295 32.949 22.964 1.00 27.34
ATOM 707 CG GLN 247 48.390 32.034 22.147 1.00 28.95
ATOM 708 CD GLN 247 47.531 32.796 21.153 1.00 30.74
ATOM 709 OE1 GLN 247 47.850 33.918 20.767 1.00 33.23

```
ATOM   710  NE2 GLN  247      46.439  32.185  20.729  1.00 35.19
ATOM   711  C   GLN  247      51.190  33.196  24.575  1.00 27.51
ATOM   712  O   GLN  247      52.377  33.261  24.256  1.00 28.70
ATOM   713  N   ILE  248      50.661  33.921  25.552  1.00 27.81
ATOM   714  CA  ILE  248      51.431  34.908  26.295  1.00 29.41
ATOM   715  CB  ILE  248      50.525  35.662  27.303  1.00 28.96
ATOM   716  CG2 ILE  248      51.356  36.476  28.279  1.00 28.67
ATOM   717  CG1 ILE  248      49.555  36.571  26.543  1.00 28.83
ATOM   718  CD1 ILE  248      48.514  37.236  27.420  1.00 30.76
ATOM   719  C   ILE  248      52.618  34.259  27.006  1.00 28.39
ATOM   720  O   ILE  248      53.759  34.715  26.869  1.00 27.88
ATOM   721  N   ILE  249      52.356  33.177  27.732  1.00 26.07
ATOM   722  CA  ILE  249      53.413  32.474  28.454  1.00 27.37
ATOM   723  CB  ILE  249      52.839  31.294  29.281  1.00 30.32
ATOM   724  CG2 ILE  249      53.958  30.425  29.840  1.00 31.29
ATOM   725  CG1 ILE  249      51.987  31.831  30.429  1.00 30.31
ATOM   726  CD1 ILE  249      51.295  30.753  31.230  1.00 31.30
ATOM   727  C   ILE  249      54.510  31.974  27.509  1.00 28.63
ATOM   728  O   ILE  249      55.701  32.100  27.808  1.00 29.59
ATOM   729  N   LEU  250      54.110  31.442  26.357  1.00 29.03
ATOM   730  CA  LEU  250      55.068  30.934  25.380  1.00 22.44
ATOM   731  CB  LEU  250      54.351  30.166  24.266  1.00 24.30
ATOM   732  CG  LEU  250      53.665  28.866  24.687  1.00 23.20
ATOM   733  CD1 LEU  250      52.951  28.273  23.502  1.00 20.36
ATOM   734  CD2 LEU  250      54.685  27.880  25.238  1.00 19.45
ATOM   735  C   LEU  250      55.919  32.055  24.794  1.00 18.97
ATOM   736  O   LEU  250      57.133  31.903  24.648  1.00 18.37
ATOM   737  N   LEU  251      55.291  33.180  24.468  1.00 20.63
ATOM   738  CA  LEU  251      56.026  34.318  23.915  1.00 27.43
ATOM   739  CB  LEU  251      55.065  35.412  23.449  1.00 22.92
ATOM   740  CG  LEU  251      54.364  35.093  22.128  1.00 24.72
ATOM   741  CD1 LEU  251      53.342  36.167  21.821  1.00 32.13
ATOM   742  CD2 LEU  251      55.389  34.981  21.009  1.00 22.46
ATOM   743  C   LEU  251      57.026  34.875  24.930  1.00 27.23
ATOM   744  O   LEU  251      58.202  35.078  24.614  1.00 26.48
ATOM   745  N   LYS  252      56.561  35.094  26.156  1.00 27.34
ATOM   746  CA  LYS  252      57.425  35.598  27.215  1.00 28.95
ATOM   747  CB  LYS  252      56.649  35.715  28.527  1.00 32.89
ATOM   748  CG  LYS  252      55.570  36.783  28.530  1.00 35.06
ATOM   749  CD  LYS  252      55.084  37.028  29.943  1.00 42.82
ATOM   750  CE  LYS  252      54.124  38.191  30.003  1.00 53.05
ATOM   751  NZ  LYS  252      53.677  38.451  31.398  1.00 64.03
ATOM   752  C   LYS  252      58.605  34.647  27.405  1.00 27.66
ATOM   753  O   LYS  252      59.734  35.076  27.646  1.00 33.16
ATOM   754  N   GLY  253      58.344  33.357  27.243  1.00 24.50
ATOM   755  CA  GLY  253      59.386  32.364  27.402  1.00 22.33
ATOM   756  C   GLY  253      60.423  32.273  26.297  1.00 23.99
```

```
ATOM   757  O   GLY  253      61.589  32.016  26.581  1.00 30.77
ATOM   758  N   CYS  254      60.041  32.526  25.049  1.00 22.66
ATOM   759  CA  CYS  254      60.986  32.405  23.934  1.00 20.75
ATOM   760  CB  CYS  254      60.386  31.494  22.868  1.00 24.86
ATOM   761  SG  CYS  254      58.996  32.276  22.014  1.00 25.55
ATOM   762  C   CYS  254      61.399  33.702  23.242  1.00 23.79
ATOM   763  O   CYS  254      62.262  33.685  22.357  1.00 22.18
ATOM   764  N   CYS  255      60.788  34.814  23.625  1.00 19.49
ATOM   765  CA  CYS  255      61.084  36.085  22.981  1.00 21.08
ATOM   766  CB  CYS  255      60.336  37.220  23.669  1.00 18.21
ATOM   767  SG  CYS  255      60.264  38.713  22.677  1.00 22.96
ATOM   768  C   CYS  255      62.570  36.413  22.842  1.00 21.87
ATOM   769  O   CYS  255      63.050  36.641  21.729  1.00 22.23
ATOM   770  N   MET  256      63.310  36.397  23.947  1.00 20.82
ATOM   771  CA  MET  256      64.741  36.706  23.895  1.00 20.50
ATOM   772  CB  MET  256      65.322  36.801  25.312  1.00 22.50
ATOM   773  CG  MET  256      66.808  37.139  25.354  1.00 16.67
ATOM   774  SD  MET  256      67.205  38.732  24.605  1.00 24.46
ATOM   775  CE  MET  256      69.027  38.764  24.791  1.00 19.21
ATOM   776  C   MET  256      65.510  35.667  23.072  1.00 18.38
ATOM   777  O   MET  256      66.401  36.005  22.293  1.00 17.68
ATOM   778  N   GLU  257      65.149  34.404  23.248  1.00 20.33
ATOM   779  CA  GLU  257      65.779  33.308  22.526  1.00 21.08
ATOM   780  CB  GLU  257      65.148  31.982  22.943  1.00 22.28
ATOM   781  CG  GLU  257      65.374  31.640  24.411  1.00 34.68
ATOM   782  CD  GLU  257      64.515  30.486  24.907  1.00 43.20
ATOM   783  OE1 GLU  257      63.823  29.836  24.091  1.00 42.14
ATOM   784  OE2 GLU  257      64.530  30.230  26.128  1.00 50.15
ATOM   785  C   GLU  257      65.650  33.503  21.018  1.00 19.26
ATOM   786  O   GLU  257      66.632  33.360  20.276  1.00 18.09
ATOM   787  N   ILE  258      64.446  33.850  20.566  1.00 16.30
ATOM   788  CA  ILE  258      64.199  34.065  19.141  1.00 18.09
ATOM   789  CB  ILE  258      62.677  34.150  18.825  1.00 18.61
ATOM   790  CG2 ILE  258      62.441  34.653  17.395  1.00 16.23
ATOM   791  CG1 ILE  258      62.032  32.771  19.021  1.00 13.80
ATOM   792  CD1 ILE  258      60.544  32.714  18.695  1.00 13.21
ATOM   793  C   ILE  258      64.948  35.297  18.638  1.00 20.12
ATOM   794  O   ILE  258      65.605  35.242  17.593  1.00 19.17
ATOM   795  N   MET  259      64.903  36.387  19.404  1.00 22.71
ATOM   796  CA  MET  259      65.602  37.611  19.015  1.00 17.09
ATOM   797  CB  MET  259      65.249  38.772  19.941  1.00 18.80
ATOM   798  CG  MET  259      63.782  39.159  19.894  1.00 17.66
ATOM   799  SD  MET  259      63.457  40.748  20.678  1.00 25.77
ATOM   800  CE  MET  259      63.774  40.377  22.374  1.00 16.65
ATOM   801  C   MET  259      67.111  37.397  18.973  1.00 19.51
ATOM   802  O   MET  259      67.797  37.913  18.080  1.00 25.53
ATOM   803  N   SER  260      67.625  36.605  19.908  1.00 19.58
```

ATOM 804 CA SER 260 69.056 36.324 19.947 1.00 16.90
ATOM 805 CB SER 260 69.434 35.631 21.251 1.00 15.56
ATOM 806 OG SER 260 69.093 36.455 22.352 1.00 22.98
ATOM 807 C SER 260 69.471 35.487 18.746 1.00 14.52
ATOM 808 O SER 260 70.496 35.761 18.129 1.00 22.82
ATOM 809 N LEU 261 68.663 34.490 18.397 1.00 16.50
ATOM 810 CA LEU 261 68.948 33.642 17.241 1.00 17.78
ATOM 811 CB LEU 261 67.878 32.552 17.092 1.00 18.38
ATOM 812 CG LEU 261 67.890 31.708 15.812 1.00 14.47
ATOM 813 CD1 LEU 261 69.159 30.877 15.728 1.00 16.76
ATOM 814 CD2 LEU 261 66.672 30.806 15.793 1.00 14.06
ATOM 815 C LEU 261 68.959 34.519 15.992 1.00 20.40
ATOM 816 O LEU 261 69.885 34.450 15.181 1.00 22.00
ATOM 817 N ARG 262 67.934 35.356 15.854 1.00 21.02
ATOM 818 CA ARG 262 67.821 36.249 14.705 1.00 22.84
ATOM 819 CB ARG 262 66.530 37.067 14.782 1.00 20.29
ATOM 820 CG ARG 262 65.311 36.267 14.364 1.00 23.33
ATOM 821 CD ARG 262 64.007 37.026 14.509 1.00 19.05
ATOM 822 NE ARG 262 62.959 36.321 13.775 1.00 21.32
ATOM 823 CZ ARG 262 61.780 36.837 13.441 1.00 23.44
ATOM 824 NH1 ARG 262 61.465 38.081 13.780 1.00 22.99
ATOM 825 NH2 ARG 262 60.933 36.116 12.713 1.00 22.09
ATOM 826 C ARG 262 69.035 37.154 14.561 1.00 22.66
ATOM 827 O ARG 262 69.434 37.483 13.445 1.00 22.41
ATOM 828 N ALA 263 69.625 37.545 15.689 1.00 23.52
ATOM 829 CA ALA 263 70.820 38.386 15.677 1.00 22.37
ATOM 830 CB ALA 263 70.986 39.089 17.018 1.00 22.76
ATOM 831 C ALA 263 72.052 37.530 15.366 1.00 22.85
ATOM 832 O ALA 263 72.882 37.897 14.529 1.00 25.50
ATOM 833 N ALA 264 72.131 36.365 16.005 1.00 21.68
ATOM 834 CA ALA 264 73.242 35.438 15.826 1.00 20.26
ATOM 835 CB ALA 264 73.092 34.256 16.763 1.00 15.97
ATOM 836 C ALA 264 73.401 34.957 14.382 1.00 23.11
ATOM 837 O ALA 264 74.523 34.831 13.892 1.00 24.87
ATOM 838 N VAL 265 72.293 34.679 13.697 1.00 22.94
ATOM 839 CA VAL 265 72.380 34.226 12.306 1.00 28.98
ATOM 840 CB VAL 265 71.072 33.547 11.797 1.00 25.97
ATOM 841 CG1 VAL 265 70.751 32.330 12.638 1.00 26.27
ATOM 842 CG2 VAL 265 69.907 34.527 11.797 1.00 26.64
ATOM 843 C VAL 265 72.761 35.373 11.369 1.00 28.81
ATOM 844 O VAL 265 72.966 35.160 10.176 1.00 31.92
ATOM 845 N ARG 266 72.830 36.587 11.915 1.00 31.83
ATOM 846 CA ARG 266 73.210 37.774 11.150 1.00 33.19
ATOM 847 CB ARG 266 72.141 38.861 11.258 1.00 31.67
ATOM 848 CG ARG 266 70.986 38.623 10.320 1.00 26.82
ATOM 849 CD ARG 266 69.913 39.668 10.454 1.00 33.95
ATOM 850 NE ARG 266 68.955 39.532 9.361 1.00 38.15

ATOM 851 CZ ARG 266 67.688 39.927 9.410 1.00 37.39
ATOM 852 NH1 ARG 266 67.198 40.491 10.509 1.00 29.92
ATOM 853 NH2 ARG 266 66.918 39.770 8.340 1.00 31.24
ATOM 854 C ARG 266 74.565 38.307 11.604 1.00 36.31
ATOM 855 O ARG 266 74.821 39.516 11.575 1.00 38.56
ATOM 856 N TYR 267 75.416 37.393 12.056 1.00 34.21
ATOM 857 CA TYR 267 76.755 37.733 12.502 1.00 35.24
ATOM 858 CB TYR 267 77.283 36.640 13.440 1.00 32.37
ATOM 859 CG TYR 267 78.774 36.699 13.703 1.00 35.07
ATOM 860 CD1 TYR 267 79.303 37.555 14.669 1.00 33.94
ATOM 861 CE1 TYR 267 80.677 37.609 14.905 1.00 36.60
ATOM 862 CD2 TYR 267 79.658 35.894 12.979 1.00 34.68
ATOM 863 CE2 TYR 267 81.029 35.940 13.208 1.00 36.07
ATOM 864 CZ TYR 267 81.533 36.797 14.170 1.00 37.14
ATOM 865 OH TYR 267 82.889 36.835 14.396 1.00 41.52
ATOM 866 C TYR 267 77.639 37.831 11.263 1.00 37.68
ATOM 867 O TYR 267 77.609 36.943 10.410 1.00 36.48
ATOM 868 N ASP 268 78.400 38.915 11.150 1.00 39.58
ATOM 869 CA ASP 268 79.301 39.096 10.016 1.00 42.77
ATOM 870 CB ASP 268 79.170 40.511 9.434 1.00 44.38
ATOM 871 CG ASP 268 80.145 40.770 8.290 1.00 50.31
ATOM 872 OD1 ASP 268 80.290 39.901 7.400 1.00 55.79
ATOM 873 OD2 ASP 268 80.773 41.847 8.280 1.00 50.24
ATOM 874 C ASP 268 80.737 38.846 10.466 1.00 42.51
ATOM 875 O ASP 268 81.305 39.645 11.208 1.00 42.75
ATOM 876 N PRO 269 81.346 37.733 10.020 1.00 44.56
ATOM 877 CD PRO 269 80.770 36.697 9.146 1.00 42.66
ATOM 878 CA PRO 269 82.725 37.395 10.393 1.00 45.98
ATOM 879 CB PRO 269 82.991 36.111 9.607 1.00 44.04
ATOM 880 CG PRO 269 81.631 35.506 9.458 1.00 43.33
ATOM 881 C PRO 269 83.710 38.492 10.004 1.00 50.31
ATOM 882 O PRO 269 84.630 38.800 10.761 1.00 49.83
ATOM 883 N ALA 270 83.486 39.100 8.840 1.00 53.62
ATOM 884 CA ALA 270 84.348 40.165 8.329 1.00 54.54
ATOM 885 CB ALA 270 83.892 40.585 6.929 1.00 51.24
ATOM 886 C ALA 270 84.449 41.389 9.248 1.00 55.69
ATOM 887 O ALA 270 85.488 42.045 9.294 1.00 57.92
ATOM 888 N SER 271 83.384 41.685 9.989 1.00 54.71
ATOM 889 CA SER 271 83.378 42.838 10.889 1.00 51.26
ATOM 890 CB SER 271 82.182 43.740 10.575 1.00 49.92
ATOM 891 OG SER 271 82.065 43.976 9.183 1.00 60.09
ATOM 892 C SER 271 83.305 42.443 12.360 1.00 50.78
ATOM 893 O SER 271 83.482 43.288 13.240 1.00 52.11
ATOM 894 N ASP 272 83.051 41.162 12.619 1.00 48.96
ATOM 895 CA ASP 272 82.898 40.643 13.978 1.00 45.53
ATOM 896 CB ASP 272 84.206 40.765 14.776 1.00 44.82
ATOM 897 CG ASP 272 84.142 40.064 16.131 1.00 47.66

```
ATOM   898  OD1 ASP  272      84.750  40.581  17.091  1.00 48.64
ATOM   899  OD2 ASP  272      83.495  38.999  16.238  1.00 43.85
ATOM   900  C   ASP  272      81.765  41.437  14.636  1.00 44.46
ATOM   901  O   ASP  272      81.904  41.958  15.747  1.00 42.41
ATOM   902  N   THR  273      80.652  41.551  13.915  1.00 39.79
ATOM   903  CA  THR  273      79.492  42.282  14.401  1.00 38.82
ATOM   904  CB  THR  273      79.334  43.648  13.670  1.00 39.73
ATOM   905  OG1 THR  273      79.288  43.439  12.254  1.00 39.36
ATOM   906  CG2 THR  273      80.496  44.578  13.991  1.00 41.31
ATOM   907  C   THR  273      78.203  41.485  14.211  1.00 38.36
ATOM   908  O   THR  273      78.151  40.546  13.408  1.00 33.79
ATOM   909  N   LEU  274      77.187  41.835  14.995  1.00 36.91
ATOM   910  CA  LEU  274      75.869  41.212  14.912  1.00 34.49
ATOM   911  CB  LEU  274      75.342  40.822  16.297  1.00 30.37
ATOM   912  CG  LEU  274      75.948  39.651  17.069  1.00 32.97
ATOM   913  CD1 LEU  274      75.297  39.593  18.440  1.00 28.23
ATOM   914  CD2 LEU  274      75.749  38.341  16.318  1.00 26.86
ATOM   915  C   LEU  274      74.956  42.289  14.352  1.00 35.35
ATOM   916  O   LEU  274      75.171  43.478  14.601  1.00 37.47
ATOM   917  N   THR  275      73.942  41.890  13.599  1.00 34.05
ATOM   918  CA  THR  275      73.020  42.868  13.052  1.00 32.62
ATOM   919  CB  THR  275      72.824  42.674  11.542  1.00 35.14
ATOM   920  OG1 THR  275      74.108  42.590  10.909  1.00 39.50
ATOM   921  CG2 THR  275      72.064  43.851  10.952  1.00 30.94
ATOM   922  C   THR  275      71.699  42.746  13.793  1.00 30.92
ATOM   923  O   THR  275      71.100  41.670  13.845  1.00 36.53
ATOM   924  N   LEU  276      71.291  43.835  14.434  1.00 28.10
ATOM   925  CA  LEU  276      70.051  43.868  15.192  1.00 27.78
ATOM   926  CB  LEU  276      70.205  44.780  16.420  1.00 22.51
ATOM   927  CG  LEU  276      71.383  44.532  17.373  1.00 25.89
ATOM   928  CD1 LEU  276      71.225  45.408  18.608  1.00 20.70
ATOM   929  CD2 LEU  276      71.456  43.069  17.782  1.00 20.79
ATOM   930  C   LEU  276      68.930  44.376  14.296  1.00 27.27
ATOM   931  O   LEU  276      69.068  45.430  13.672  1.00 29.06
ATOM   932  N   SER  277      67.854  43.598  14.187  1.00 25.97
ATOM   933  CA  SER  277      66.697  43.957  13.366  1.00 28.63
ATOM   934  CB  SER  277      65.990  45.177  13.967  1.00 27.78
ATOM   935  OG  SER  277      65.561  44.905  15.290  1.00 22.65
ATOM   936  C   SER  277      67.067  44.209  11.897  1.00 30.31
ATOM   937  O   SER  277      66.374  44.939  11.181  1.00 28.52
ATOM   938  N   GLY  278      68.168  43.597  11.465  1.00 31.24
ATOM   939  CA  GLY  278      68.638  43.754  10.101  1.00 39.59
ATOM   940  C   GLY  278      68.999  45.178   9.706  1.00 44.55
ATOM   941  O   GLY  278      69.104  45.479   8.517  1.00 46.66
ATOM   942  N   GLU  279      69.234  46.046  10.686  1.00 43.47
ATOM   943  CA  GLU  279      69.566  47.435  10.387  1.00 43.87
ATOM   944  CB  GLU  279      68.314  48.312  10.515  1.00 44.28
```

ATOM 945 CG GLU 279 67.703 48.322 11.908 1.00 52.30
ATOM 946 CD GLU 279 66.440 49.159 12.001 1.00 60.23
ATOM 947 OE1 GLU 279 66.398 50.074 12.853 1.00 63.06
ATOM 948 OE2 GLU 279 65.485 48.894 11.238 1.00 65.67
ATOM 949 C GLU 279 70.700 48.038 11.216 1.00 42.40
ATOM 950 O GLU 279 71.330 49.001 10.787 1.00 43.89
ATOM 951 N MET 280 70.977 47.472 12.388 1.00 40.86
ATOM 952 CA MET 280 72.027 48.009 13.248 1.00 32.80
ATOM 953 CB MET 280 71.435 48.415 14.603 1.00 29.25
ATOM 954 CG MET 280 72.384 49.193 15.506 1.00 31.64
ATOM 955 SD MET 280 71.830 49.235 17.232 1.00 34.02
ATOM 956 CE MET 280 70.566 50.495 17.197 1.00 26.56
ATOM 957 C MET 280 73.172 47.033 13.465 1.00 32.77
ATOM 958 O MET 280 72.983 45.971 14.058 1.00 34.61
ATOM 959 N ALA 281 74.351 47.375 12.959 1.00 31.87
ATOM 960 CA ALA 281 75.523 46.526 13.147 1.00 34.71
ATOM 961 CB ALA 281 76.519 46.727 12.023 1.00 34.42
ATOM 962 C ALA 281 76.125 46.950 14.482 1.00 36.76
ATOM 963 O ALA 281 76.416 48.129 14.693 1.00 34.59
ATOM 964 N VAL 282 76.275 45.993 15.390 1.00 37.16
ATOM 965 CA VAL 282 76.798 46.263 16.721 1.00 37.83
ATOM 966 CB VAL 282 75.692 46.023 17.780 1.00 37.58
ATOM 967 CG1 VAL 282 76.219 46.271 19.175 1.00 48.99
ATOM 968 CG2 VAL 282 74.514 46.939 17.514 1.00 43.59
ATOM 969 C VAL 282 78.017 45.400 17.046 1.00 39.04
ATOM 970 O VAL 282 78.081 44.230 16.660 1.00 39.16
ATOM 971 N LYS 283 78.989 45.993 17.735 1.00 38.75
ATOM 972 CA LYS 283 80.205 45.287 18.136 1.00 42.18
ATOM 973 CB LYS 283 81.428 46.208 18.045 1.00 47.46
ATOM 974 CG LYS 283 81.803 46.617 16.632 1.00 51.71
ATOM 975 CD LYS 283 83.092 47.416 16.618 1.00 59.26
ATOM 976 CE LYS 283 83.481 47.813 15.202 1.00 62.52
ATOM 977 NZ LYS 283 82.492 48.742 14.588 1.00 66.27
ATOM 978 C LYS 283 80.075 44.746 19.559 1.00 38.78
ATOM 979 O LYS 283 79.283 45.257 20.356 1.00 40.63
ATOM 980 N ARG 284 80.900 43.753 19.881 1.00 36.01
ATOM 981 CA ARG 284 80.908 43.104 21.189 1.00 38.62
ATOM 982 CB ARG 284 82.150 42.224 21.327 1.00 38.83
ATOM 983 CG ARG 284 82.220 41.091 20.333 1.00 41.87
ATOM 984 CD ARG 284 83.521 40.335 20.451 1.00 39.60
ATOM 985 NE ARG 284 83.506 39.120 19.644 1.00 45.18
ATOM 986 CZ ARG 284 83.259 37.905 20.128 1.00 44.79
ATOM 987 NH1 ARG 284 83.005 37.739 21.421 1.00 41.84
ATOM 988 NH2 ARG 284 83.271 36.852 19.319 1.00 42.27
ATOM 989 C ARG 284 80.829 44.051 22.385 1.00 41.18
ATOM 990 O ARG 284 79.995 43.867 23.274 1.00 44.38
ATOM 991 N GLU 285 81.703 45.052 22.416 1.00 38.71

ATOM 992 CA GLU 285 81.724 46.002 23.525 1.00 37.18
ATOM 993 CB GLU 285 82.950 46.906 23.422 1.00 36.65
ATOM 994 C GLU 285 80.444 46.838 23.614 1.00 35.71
ATOM 995 O GLU 285 79.921 47.074 24.704 1.00 33.00
ATOM 996 N GLN 286 79.920 47.245 22.463 1.00 32.01
ATOM 997 CA GLN 286 78.714 48.061 22.425 1.00 32.31
ATOM 998 CB GLN 286 78.440 48.525 20.997 1.00 38.24
ATOM 999 CG GLN 286 79.565 49.352 20.392 1.00 42.42
ATOM 1000 CD GLN 286 79.277 49.761 18.964 1.00 44.79
ATOM 1001 OE1 GLN 286 79.103 48.910 18.089 1.00 42.21
ATOM 1002 NE2 GLN 286 79.215 51.063 18.719 1.00 47.53
ATOM 1003 C GLN 286 77.484 47.355 23.002 1.00 33.08
ATOM 1004 O GLN 286 76.770 47.929 23.827 1.00 30.95
ATOM 1005 N LEU 287 77.245 46.114 22.579 1.00 31.49
ATOM 1006 CA LEU 287 76.095 45.350 23.068 1.00 31.01
ATOM 1007 CB LEU 287 75.892 44.073 22.242 1.00 24.63
ATOM 1008 CG LEU 287 74.498 43.780 21.661 1.00 27.34
ATOM 1009 CD1 LEU 287 74.382 42.282 21.359 1.00 20.50
ATOM 1010 CD2 LEU 287 73.393 44.205 22.616 1.00 14.41
ATOM 1011 C LEU 287 76.298 44.986 24.538 1.00 32.80
ATOM 1012 O LEU 287 75.351 45.014 25.334 1.00 32.10
ATOM 1013 N LYS 288 77.536 44.641 24.885 1.00 32.54
ATOM 1014 CA LYS 288 77.897 44.280 26.251 1.00 30.70
ATOM 1015 CB LYS 288 79.376 43.893 26.315 1.00 31.24
ATOM 1016 CG LYS 288 79.834 43.382 27.662 1.00 34.69
ATOM 1017 CD LYS 288 81.227 42.784 27.574 1.00 37.69
ATOM 1018 CE LYS 288 81.638 42.177 28.904 1.00 42.86
ATOM 1019 NZ LYS 288 82.883 41.369 28.786 1.00 49.63
ATOM 1020 C LYS 288 77.611 45.448 27.189 1.00 28.74
ATOM 1021 O LYS 288 76.827 45.319 28.129 1.00 34.45
ATOM 1022 N ASN 289 78.190 46.602 26.882 1.00 26.57
ATOM 1023 CA ASN 289 78.011 47.803 27.691 1.00 30.84
ATOM 1024 CB ASN 289 79.012 48.879 27.274 1.00 26.04
ATOM 1025 CG ASN 289 80.437 48.485 27.570 1.00 35.16
ATOM 1026 OD1 ASN 289 80.700 47.718 28.499 1.00 42.54
ATOM 1027 ND2 ASN 289 81.371 48.998 26.784 1.00 32.82
ATOM 1028 C ASN 289 76.602 48.371 27.620 1.00 35.05
ATOM 1029 O ASN 289 76.154 49.039 28.550 1.00 36.94
ATOM 1030 N GLY 290 75.909 48.113 26.515 1.00 32.43
ATOM 1031 CA GLY 290 74.556 48.614 26.345 1.00 28.66
ATOM 1032 C GLY 290 73.525 48.024 27.289 1.00 28.48
ATOM 1033 O GLY 290 72.377 48.467 27.308 1.00 28.17
ATOM 1034 N GLY 291 73.908 47.002 28.047 1.00 28.66
ATOM 1035 CA GLY 291 72.969 46.408 28.980 1.00 29.19
ATOM 1036 C GLY 291 72.976 44.894 29.075 1.00 29.76
ATOM 1037 O GLY 291 72.595 44.340 30.105 1.00 34.44
ATOM 1038 N LEU 292 73.399 44.213 28.017 1.00 29.69

ATOM 1039 CA LEU 292 73.410 42.755 28.036 1.00 30.64
ATOM 1040 CB LEU 292 73.421 42.194 26.611 1.00 27.07
ATOM 1041 CG LEU 292 72.113 42.348 25.833 1.00 23.27
ATOM 1042 CD1 LEU 292 72.202 41.580 24.532 1.00 22.24
ATOM 1043 CD2 LEU 292 70.950 41.827 26.661 1.00 23.80
ATOM 1044 C LEU 292 74.530 42.125 28.861 1.00 29.22
ATOM 1045 O LEU 292 74.365 41.033 29.404 1.00 31.02
ATOM 1046 N GLY 293 75.671 42.800 28.945 1.00 30.26
ATOM 1047 CA GLY 293 76.788 42.259 29.700 1.00 28.37
ATOM 1048 C GLY 293 77.307 40.995 29.040 1.00 29.85
ATOM 1049 O GLY 293 77.460 40.951 27.820 1.00 32.37
ATOM 1050 N VAL 294 77.537 39.953 29.832 1.00 30.08
ATOM 1051 CA VAL 294 78.041 38.687 29.308 1.00 31.62
ATOM 1052 CB VAL 294 78.466 37.716 30.442 1.00 29.11
ATOM 1053 CG1 VAL 294 79.649 38.292 31.191 1.00 31.37
ATOM 1054 CG2 VAL 294 77.304 37.443 31.396 1.00 26.69
ATOM 1055 C VAL 294 77.079 37.978 28.351 1.00 32.81
ATOM 1056 O VAL 294 77.496 37.095 27.591 1.00 33.00
ATOM 1057 N VAL 295 75.801 38.356 28.380 1.00 30.45
ATOM 1058 CA VAL 295 74.814 37.752 27.487 1.00 28.02
ATOM 1059 CB VAL 295 73.378 38.232 27.793 1.00 29.96
ATOM 1060 CG1 VAL 295 72.380 37.575 26.838 1.00 22.55
ATOM 1061 CG2 VAL 295 73.016 37.903 29.232 1.00 20.10
ATOM 1062 C VAL 295 75.203 38.115 26.057 1.00 29.90
ATOM 1063 O VAL 295 75.047 37.312 25.140 1.00 34.47
ATOM 1064 N SER 296 75.762 39.309 25.886 1.00 29.11
ATOM 1065 CA SER 296 76.215 39.771 24.581 1.00 30.96
ATOM 1066 CB SER 296 76.785 41.184 24.702 1.00 27.26
ATOM 1067 OG SER 296 77.300 41.648 23.469 1.00 22.93
ATOM 1068 C SER 296 77.294 38.811 24.080 1.00 36.41
ATOM 1069 O SER 296 77.238 38.341 22.939 1.00 38.84
ATOM 1070 N ASP 297 78.254 38.501 24.954 1.00 35.29
ATOM 1071 CA ASP 297 79.346 37.585 24.629 1.00 32.14
ATOM 1072 CB ASP 297 80.245 37.356 25.851 1.00 36.57
ATOM 1073 CG ASP 297 80.958 38.616 26.307 1.00 41.75
ATOM 1074 OD1 ASP 297 81.492 39.352 25.447 1.00 45.45
ATOM 1075 OD2 ASP 297 80.999 38.861 27.532 1.00 45.15
ATOM 1076 C ASP 297 78.768 36.249 24.191 1.00 29.61
ATOM 1077 O ASP 297 79.242 35.644 23.231 1.00 32.90
ATOM 1078 N ALA 298 77.738 35.804 24.903 1.00 27.85
ATOM 1079 CA ALA 298 77.071 34.544 24.608 1.00 27.89
ATOM 1080 CB ALA 298 75.998 34.258 25.657 1.00 21.67
ATOM 1081 C ALA 298 76.462 34.539 23.202 1.00 28.26
ATOM 1082 O ALA 298 76.648 33.579 22.446 1.00 30.19
ATOM 1083 N ILE 299 75.744 35.606 22.853 1.00 25.20
ATOM 1084 CA ILE 299 75.119 35.708 21.537 1.00 23.46
ATOM 1085 CB ILE 299 74.200 36.944 21.427 1.00 21.63

ATOM 1086 CG2 ILE 299 73.491 36.946 20.078 1.00 22.20
ATOM 1087 CG1 ILE 299 73.145 36.914 22.536 1.00 19.79
ATOM 1088 CD1 ILE 299 72.245 38.139 22.578 1.00 18.33
ATOM 1089 C ILE 299 76.181 35.752 20.444 1.00 26.28
ATOM 1090 O ILE 299 76.043 35.095 19.414 1.00 31.72
ATOM 1091 N PHE 300 77.247 36.512 20.675 1.00 29.35
ATOM 1092 CA PHE 300 78.338 36.613 19.709 1.00 29.01
ATOM 1093 CB PHE 300 79.386 37.622 20.182 1.00 29.53
ATOM 1094 CG PHE 300 79.239 38.978 19.562 1.00 27.60
ATOM 1095 CD1 PHE 300 78.481 39.964 20.179 1.00 24.86
ATOM 1096 CD2 PHE 300 79.853 39.266 18.350 1.00 27.39
ATOM 1097 CE1 PHE 300 78.337 41.218 19.597 1.00 25.66
ATOM 1098 CE2 PHE 300 79.715 40.518 17.761 1.00 25.97
ATOM 1099 CZ PHE 300 78.956 41.495 18.384 1.00 21.03
ATOM 1100 C PHE 300 78.988 35.248 19.496 1.00 30.34
ATOM 1101 O PHE 300 79.309 34.873 18.367 1.00 29.35
ATOM 1102 N GLU 301 79.181 34.507 20.582 1.00 31.04
ATOM 1103 CA GLU 301 79.775 33.178 20.499 1.00 33.60
ATOM 1104 CB GLU 301 80.012 32.607 21.898 1.00 31.64
ATOM 1105 C GLU 301 78.851 32.265 19.696 1.00 33.90
ATOM 1106 O GLU 301 79.315 31.473 18.872 1.00 33.33
ATOM 1107 N LEU 302 77.546 32.386 19.935 1.00 31.13
ATOM 1108 CA LEU 302 76.556 31.581 19.227 1.00 27.57
ATOM 1109 CB LEU 302 75.150 31.842 19.776 1.00 25.24
ATOM 1110 CG LEU 302 73.994 31.131 19.059 1.00 28.59
ATOM 1111 CD1 LEU 302 74.066 29.634 19.299 1.00 25.52
ATOM 1112 CD2 LEU 302 72.660 31.682 19.532 1.00 19.30
ATOM 1113 C LEU 302 76.601 31.904 17.739 1.00 26.80
ATOM 1114 O LEU 302 76.682 31.003 16.904 1.00 27.81
ATOM 1115 N GLY 303 76.576 33.195 17.416 1.00 26.47
ATOM 1116 CA GLY 303 76.611 33.624 16.030 1.00 26.99
ATOM 1117 C GLY 303 77.845 33.133 15.295 1.00 33.46
ATOM 1118 O GLY 303 77.757 32.646 14.164 1.00 32.33
ATOM 1119 N LYS 304 78.994 33.232 15.956 1.00 34.63
ATOM 1120 CA LYS 304 80.269 32.813 15.383 1.00 36.20
ATOM 1121 CB LYS 304 81.399 33.115 16.372 1.00 41.96
ATOM 1122 CG LYS 304 82.779 33.179 15.757 1.00 47.05
ATOM 1123 CD LYS 304 83.800 33.610 16.796 1.00 59.47
ATOM 1124 CE LYS 304 85.179 33.791 16.181 1.00 65.89
ATOM 1125 NZ LYS 304 85.182 34.863 15.144 1.00 71.01
ATOM 1126 C LYS 304 80.276 31.332 14.992 1.00 33.17
ATOM 1127 O LYS 304 80.752 30.974 13.913 1.00 34.44
ATOM 1128 N SER 305 79.739 30.482 15.861 1.00 31.40
ATOM 1129 CA SER 305 79.687 29.048 15.594 1.00 33.10
ATOM 1130 CB SER 305 79.513 28.266 16.900 1.00 34.10
ATOM 1131 OG SER 305 78.391 28.727 17.633 1.00 40.61
ATOM 1132 C SER 305 78.597 28.664 14.589 1.00 33.02

ATOM 1133 O SER 305 78.771 27.718 13.816 1.00 35.32
ATOM 1134 N LEU 306 77.488 29.404 14.580 1.00 32.14
ATOM 1135 CA LEU 306 76.391 29.121 13.653 1.00 31.02
ATOM 1136 CB LEU 306 75.138 29.936 13.996 1.00 22.76
ATOM 1137 CG LEU 306 74.361 29.487 15.235 1.00 24.42
ATOM 1138 CD1 LEU 306 73.094 30.311 15.380 1.00 23.13
ATOM 1139 CD2 LEU 306 74.016 28.009 15.126 1.00 25.53
ATOM 1140 C LEU 306 76.780 29.354 12.198 1.00 33.11
ATOM 1141 O LEU 306 76.161 28.796 11.293 1.00 32.60
ATOM 1142 N SER 307 77.821 30.153 11.975 1.00 36.12
ATOM 1143 CA SER 307 78.296 30.448 10.624 1.00 38.80
ATOM 1144 CB SER 307 79.514 31.373 10.677 1.00 41.64
ATOM 1145 OG SER 307 79.224 32.556 11.401 1.00 54.66
ATOM 1146 C SER 307 78.650 29.182 9.845 1.00 36.98
ATOM 1147 O SER 307 78.302 29.055 8.669 1.00 42.87
ATOM 1148 N ALA 308 79.315 28.239 10.509 1.00 35.72
ATOM 1149 CA ALA 308 79.719 26.983 9.879 1.00 32.70
ATOM 1150 CB ALA 308 80.683 26.227 10.782 1.00 33.88
ATOM 1151 C ALA 308 78.531 26.093 9.521 1.00 34.83
ATOM 1152 O ALA 308 78.620 25.278 8.600 1.00 39.61
ATOM 1153 N PHE 309 77.424 26.250 10.244 1.00 31.54
ATOM 1154 CA PHE 309 76.226 25.453 9.999 1.00 32.43
ATOM 1155 CB PHE 309 75.259 25.558 11.182 1.00 30.89
ATOM 1156 CG PHE 309 75.718 24.826 12.415 1.00 33.73
ATOM 1157 CD1 PHE 309 76.769 25.314 13.183 1.00 40.48
ATOM 1158 CD2 PHE 309 75.091 23.654 12.816 1.00 35.96
ATOM 1159 CE1 PHE 309 77.189 24.643 14.334 1.00 37.87
ATOM 1160 CE2 PHE 309 75.502 22.975 13.962 1.00 38.44
ATOM 1161 CZ PHE 309 76.553 23.471 14.722 1.00 37.34
ATOM 1162 C PHE 309 75.507 25.809 8.693 1.00 34.76
ATOM 1163 O PHE 309 74.810 24.969 8.118 1.00 36.18
ATOM 1164 N ASN 310 75.693 27.040 8.218 1.00 35.80
ATOM 1165 CA ASN 310 75.060 27.506 6.980 1.00 41.00
ATOM 1166 CB ASN 310 75.705 26.852 5.755 1.00 51.94
ATOM 1167 CG ASN 310 77.053 27.452 5.419 1.00 67.92
ATOM 1168 OD1 ASN 310 77.139 28.439 4.687 1.00 77.32
ATOM 1169 ND2 ASN 310 78.116 26.869 5.962 1.00 72.62
ATOM 1170 C ASN 310 73.560 27.245 6.985 1.00 38.15
ATOM 1171 O ASN 310 73.034 26.515 6.141 1.00 35.87
ATOM 1172 N LEU 311 72.885 27.819 7.971 1.00 33.94
ATOM 1173 CA LEU 311 71.450 27.651 8.111 1.00 32.09
ATOM 1174 CB LEU 311 71.011 28.009 9.533 1.00 28.06
ATOM 1175 CG LEU 311 71.656 27.301 10.724 1.00 26.38
ATOM 1176 CD1 LEU 311 71.092 27.883 12.012 1.00 23.56
ATOM 1177 CD2 LEU 311 71.409 25.801 10.651 1.00 21.24
ATOM 1178 C LEU 311 70.705 28.542 7.124 1.00 33.00
ATOM 1179 O LEU 311 71.173 29.630 6.782 1.00 35.47

ATOM 1180 N ASP 312 69.569 28.057 6.638 1.00 27.78
ATOM 1181 CA ASP 312 68.749 28.841 5.733 1.00 27.06
ATOM 1182 CB ASP 312 68.385 28.049 4.456 1.00 25.84
ATOM 1183 CG ASP 312 67.580 26.778 4.724 1.00 25.67
ATOM 1184 OD1 ASP 312 67.124 26.541 5.860 1.00 28.20
ATOM 1185 OD2 ASP 312 67.387 26.008 3.762 1.00 27.62
ATOM 1186 C ASP 312 67.517 29.314 6.514 1.00 28.51
ATOM 1187 O ASP 312 67.371 28.990 7.703 1.00 25.35
ATOM 1188 N ASP 313 66.633 30.060 5.855 1.00 22.16
ATOM 1189 CA ASP 313 65.430 30.589 6.494 1.00 21.37
ATOM 1190 CB ASP 313 64.625 31.431 5.499 1.00 25.11
ATOM 1191 CG ASP 313 65.380 32.666 5.025 1.00 31.54
ATOM 1192 OD1 ASP 313 65.119 33.115 3.890 1.00 35.35
ATOM 1193 OD2 ASP 313 66.225 33.193 5.783 1.00 35.37
ATOM 1194 C ASP 313 64.524 29.535 7.120 1.00 21.11
ATOM 1195 O ASP 313 63.904 29.783 8.158 1.00 23.68
ATOM 1196 N THR 314 64.440 28.367 6.489 1.00 22.88
ATOM 1197 CA THR 314 63.591 27.281 6.981 1.00 22.81
ATOM 1198 CB THR 314 63.472 26.155 5.927 1.00 26.00
ATOM 1199 OG1 THR 314 62.873 26.679 4.732 1.00 20.14
ATOM 1200 CG2 THR 314 62.629 25.010 6.457 1.00 17.51
ATOM 1201 C THR 314 64.086 26.706 8.310 1.00 19.46
ATOM 1202 O THR 314 63.312 26.529 9.247 1.00 19.33
ATOM 1203 N GLU 315 65.381 26.431 8.392 1.00 17.49
ATOM 1204 CA GLU 315 65.965 25.885 9.611 1.00 20.62
ATOM 1205 CB GLU 315 67.426 25.514 9.358 1.00 14.39
ATOM 1206 CG GLU 315 67.539 24.339 8.400 1.00 13.07
ATOM 1207 CD GLU 315 68.923 24.125 7.835 1.00 14.98
ATOM 1208 OE1 GLU 315 69.634 25.116 7.552 1.00 17.71
ATOM 1209 OE2 GLU 315 69.287 22.948 7.651 1.00 17.88
ATOM 1210 C GLU 315 65.810 26.883 10.762 1.00 20.57
ATOM 1211 O GLU 315 65.368 26.518 11.854 1.00 18.43
ATOM 1212 N VAL 316 66.096 28.154 10.488 1.00 19.19
ATOM 1213 CA VAL 316 65.955 29.203 11.490 1.00 16.53
ATOM 1214 CB VAL 316 66.418 30.567 10.933 1.00 17.42
ATOM 1215 CG1 VAL 316 66.149 31.687 11.940 1.00 13.89
ATOM 1216 CG2 VAL 316 67.900 30.506 10.594 1.00 14.31
ATOM 1217 C VAL 316 64.488 29.291 11.927 1.00 19.53
ATOM 1218 O VAL 316 64.191 29.448 13.110 1.00 19.86
ATOM 1219 N ALA 317 63.575 29.159 10.970 1.00 19.02
ATOM 1220 CA ALA 317 62.145 29.215 11.254 1.00 16.95
ATOM 1221 CB ALA 317 61.357 29.239 9.951 1.00 17.68
ATOM 1222 C ALA 317 61.674 28.047 12.126 1.00 14.13
ATOM 1223 O ALA 317 60.875 28.228 13.045 1.00 15.34
ATOM 1224 N LEU 318 62.154 26.847 11.819 1.00 17.41
ATOM 1225 CA LEU 318 61.769 25.653 12.569 1.00 19.10
ATOM 1226 CB LEU 318 62.186 24.398 11.802 1.00 18.21

ATOM 1227 CG LEU 318 61.443 24.209 10.473 1.00 19.02
ATOM 1228 CD1 LEU 318 62.105 23.128 9.646 1.00 16.10
ATOM 1229 CD2 LEU 318 59.987 23.875 10.735 1.00 11.32
ATOM 1230 C LEU 318 62.399 25.685 13.954 1.00 22.38
ATOM 1231 O LEU 318 61.782 25.278 14.945 1.00 21.64
ATOM 1232 N LEU 319 63.619 26.207 14.016 1.00 20.97
ATOM 1233 CA LEU 319 64.338 26.344 15.270 1.00 19.71
ATOM 1234 CB LEU 319 65.715 26.951 15.005 1.00 20.56
ATOM 1235 CG LEU 319 66.722 27.036 16.152 1.00 32.05
ATOM 1236 CD1 LEU 319 66.704 25.760 16.963 1.00 33.15
ATOM 1237 CD2 LEU 319 68.109 27.303 15.590 1.00 28.25
ATOM 1238 C LEU 319 63.496 27.254 16.164 1.00 20.66
ATOM 1239 O LEU 319 63.215 26.920 17.313 1.00 24.47
ATOM 1240 N GLN 320 63.026 28.365 15.604 1.00 19.25
ATOM 1241 CA GLN 320 62.191 29.307 16.346 1.00 19.02
ATOM 1242 CB GLN 320 61.842 30.526 15.488 1.00 19.11
ATOM 1243 CG GLN 320 63.032 31.377 15.101 1.00 20.02
ATOM 1244 CD GLN 320 62.665 32.562 14.224 1.00 23.65
ATOM 1245 OE1 GLN 320 63.487 33.445 13.997 1.00 22.68
ATOM 1246 NE2 GLN 320 61.440 32.574 13.704 1.00 20.77
ATOM 1247 C GLN 320 60.905 28.635 16.811 1.00 20.52
ATOM 1248 O GLN 320 60.465 28.845 17.938 1.00 22.04
ATOM 1249 N ALA 321 60.306 27.825 15.942 1.00 21.01
ATOM 1250 CA ALA 321 59.069 27.128 16.280 1.00 16.83
ATOM 1251 CB ALA 321 58.556 26.358 15.079 1.00 16.58
ATOM 1252 C ALA 321 59.288 26.185 17.462 1.00 18.15
ATOM 1253 O ALA 321 58.427 26.069 18.344 1.00 13.03
ATOM 1254 N VAL 322 60.442 25.523 17.481 1.00 14.89
ATOM 1255 CA VAL 322 60.774 24.599 18.559 1.00 19.05
ATOM 1256 CB VAL 322 62.051 23.779 18.233 1.00 21.50
ATOM 1257 CG1 VAL 322 62.510 22.990 19.457 1.00 21.49
ATOM 1258 CG2 VAL 322 61.773 22.819 17.073 1.00 15.42
ATOM 1259 C VAL 322 60.947 25.375 19.867 1.00 19.89
ATOM 1260 O VAL 322 60.478 24.940 20.919 1.00 21.58
ATOM 1261 N LEU 323 61.591 26.537 19.788 1.00 20.25
ATOM 1262 CA LEU 323 61.804 27.387 20.959 1.00 19.32
ATOM 1263 CB LEU 323 62.683 28.586 20.597 1.00 12.95
ATOM 1264 CG LEU 323 64.129 28.273 20.217 1.00 20.70
ATOM 1265 CD1 LEU 323 64.805 29.503 19.641 1.00 13.23
ATOM 1266 CD2 LEU 323 64.883 27.767 21.438 1.00 22.91
ATOM 1267 C LEU 323 60.468 27.884 21.497 1.00 20.25
ATOM 1268 O LEU 323 60.251 27.918 22.706 1.00 25.88
ATOM 1269 N LEU 324 59.571 28.251 20.587 1.00 23.08
ATOM 1270 CA LEU 324 58.248 28.753 20.944 1.00 21.24
ATOM 1271 CB LEU 324 57.555 29.333 19.707 1.00 18.45
ATOM 1272 CG LEU 324 56.119 29.847 19.868 1.00 17.07
ATOM 1273 CD1 LEU 324 56.083 31.092 20.752 1.00 15.39

ATOM 1274 CD2 LEU 324 55.545 30.162 18.498 1.00 17.90
ATOM 1275 C LEU 324 57.342 27.706 21.598 1.00 21.54
ATOM 1276 O LEU 324 56.742 27.967 22.642 1.00 23.41
ATOM 1277 N MET 325 57.249 26.521 21.003 1.00 24.63
ATOM 1278 CA MET 325 56.380 25.476 21.545 1.00 25.35
ATOM 1279 CB MET 325 55.901 24.536 20.430 1.00 25.53
ATOM 1280 CG MET 325 55.235 25.220 19.232 1.00 21.89
ATOM 1281 SD MET 325 53.871 26.337 19.649 1.00 25.50
ATOM 1282 CE MET 325 52.705 25.250 20.397 1.00 17.66
ATOM 1283 C MET 325 57.031 24.676 22.675 1.00 27.58
ATOM 1284 O MET 325 56.988 23.450 22.690 1.00 28.61
ATOM 1285 N SER 326 57.613 25.376 23.638 1.00 27.98
ATOM 1286 CA SER 326 58.265 24.718 24.757 1.00 31.60
ATOM 1287 CB SER 326 59.527 25.493 25.155 1.00 35.80
ATOM 1288 OG SER 326 60.123 24.966 26.327 1.00 43.74
ATOM 1289 C SER 326 57.313 24.624 25.939 1.00 32.12
ATOM 1290 O SER 326 56.590 25.574 26.240 1.00 30.91
ATOM 1291 N THR 327 57.276 23.464 26.583 1.00 35.41
ATOM 1292 CA THR 327 56.420 23.278 27.747 1.00 39.61
ATOM 1293 CB THR 327 55.777 21.890 27.758 1.00 38.84
ATOM 1294 OG1 THR 327 56.784 20.890 27.538 1.00 42.53
ATOM 1295 CG2 THR 327 54.716 21.802 26.679 1.00 40.78
ATOM 1296 C THR 327 57.232 23.471 29.022 1.00 43.86
ATOM 1297 O THR 327 56.785 23.133 30.118 1.00 42.40
ATOM 1298 N ASP 328 58.417 24.054 28.869 1.00 47.35
ATOM 1299 CA ASP 328 59.309 24.308 29.987 1.00 49.43
ATOM 1300 CB ASP 328 60.750 24.358 29.482 1.00 58.03
ATOM 1301 CG ASP 328 61.718 23.687 30.425 1.00 72.16
ATOM 1302 OD1 ASP 328 61.816 24.117 31.595 1.00 82.32
ATOM 1303 OD2 ASP 328 62.378 22.720 29.994 1.00 81.63
ATOM 1304 C ASP 328 58.951 25.625 30.676 1.00 47.99
ATOM 1305 O ASP 328 59.830 26.373 31.093 1.00 53.33
ATOM 1306 N ARG 329 57.657 25.910 30.780 1.00 48.33
ATOM 1307 CA ARG 329 57.177 27.135 31.413 1.00 47.67
ATOM 1308 CB ARG 329 56.562 28.091 30.379 1.00 47.64
ATOM 1309 CG ARG 329 57.550 28.802 29.450 1.00 47.87
ATOM 1310 CD ARG 329 57.893 27.968 28.226 1.00 44.00
ATOM 1311 NE ARG 329 58.759 28.682 27.288 1.00 41.17
ATOM 1312 CZ ARG 329 60.087 28.605 27.283 1.00 48.58
ATOM 1313 NH1 ARG 329 60.719 27.848 28.172 1.00 52.94
ATOM 1314 NH2 ARG 329 60.784 29.257 26.362 1.00 43.16
ATOM 1315 C ARG 329 56.126 26.778 32.457 1.00 48.01
ATOM 1316 O ARG 329 55.573 25.677 32.437 1.00 50.22
ATOM 1317 N SER 330 55.832 27.716 33.351 1.00 47.37
ATOM 1318 CA SER 330 54.848 27.490 34.402 1.00 47.64
ATOM 1319 CB SER 330 55.376 28.021 35.736 1.00 46.62
ATOM 1320 C SER 330 53.506 28.139 34.074 1.00 46.40

ATOM 1321 O SER 330 53.460 29.252 33.548 1.00 48.49
ATOM 1322 N GLY 331 52.421 27.424 34.359 1.00 44.16
ATOM 1323 CA GLY 331 51.090 27.956 34.123 1.00 41.44
ATOM 1324 C GLY 331 50.424 27.660 32.790 1.00 42.83
ATOM 1325 O GLY 331 49.478 28.351 32.413 1.00 45.88
ATOM 1326 N LEU 332 50.889 26.643 32.075 1.00 40.10
ATOM 1327 CA LEU 332 50.288 26.300 30.789 1.00 39.27
ATOM 1328 CB LEU 332 51.301 25.596 29.885 1.00 37.42
ATOM 1329 CG LEU 332 52.436 26.426 29.291 1.00 35.35
ATOM 1330 CD1 LEU 332 53.374 25.505 28.530 1.00 31.61
ATOM 1331 CD2 LEU 332 51.875 27.511 28.376 1.00 31.82
ATOM 1332 C LEU 332 49.058 25.415 30.951 1.00 39.32
ATOM 1333 O LEU 332 49.060 24.467 31.738 1.00 42.74
ATOM 1334 N LEU 333 48.009 25.730 30.202 1.00 37.62
ATOM 1335 CA LEU 333 46.778 24.953 30.241 1.00 41.30
ATOM 1336 CB LEU 333 45.586 25.835 29.852 1.00 43.52
ATOM 1337 CG LEU 333 45.125 26.904 30.848 1.00 49.39
ATOM 1338 CD1 LEU 333 44.296 27.970 30.142 1.00 46.19
ATOM 1339 CD2 LEU 333 44.330 26.248 31.968 1.00 51.29
ATOM 1340 C LEU 333 46.859 23.762 29.285 1.00 41.39
ATOM 1341 O LEU 333 46.565 22.628 29.657 1.00 43.41
ATOM 1342 N CYA 334 47.317 24.024 28.067 1.00 42.18
ATOM 1343 CA CYA 334 47.409 23.003 27.029 1.00 39.56
ATOM 1344 CB CYA 334 47.004 23.616 25.691 1.00 45.48
ATOM 1345 SG CYA 334 45.517 24.616 25.785 1.00 51.57
ATOM 1346 AS CYA 334 44.187 22.808 25.555 1.00 90.90
ATOM 1347 C CYA 334 48.776 22.347 26.891 1.00 38.28
ATOM 1348 O CYA 334 49.273 22.178 25.778 1.00 40.95
ATOM 1349 N VAL 335 49.345 21.913 28.009 1.00 36.05
ATOM 1350 CA VAL 335 50.661 21.278 28.006 1.00 35.78
ATOM 1351 CB VAL 335 50.996 20.679 29.399 1.00 35.53
ATOM 1352 CG1 VAL 335 52.413 20.123 29.407 1.00 32.76
ATOM 1353 CG2 VAL 335 50.822 21.729 30.490 1.00 28.87
ATOM 1354 C VAL 335 50.776 20.170 26.950 1.00 36.41
ATOM 1355 O VAL 335 51.756 20.104 26.202 1.00 34.26
ATOM 1356 N ASP 336 49.756 19.323 26.880 1.00 38.42
ATOM 1357 CA ASP 336 49.736 18.209 25.942 1.00 39.71
ATOM 1358 CB ASP 336 48.485 17.359 26.179 1.00 51.53
ATOM 1359 CG ASP 336 48.534 16.028 25.452 1.00 65.98
ATOM 1360 OD1 ASP 336 49.240 15.114 25.934 1.00 70.75
ATOM 1361 OD2 ASP 336 47.858 15.891 24.406 1.00 72.15
ATOM 1362 C ASP 336 49.794 18.668 24.486 1.00 37.72
ATOM 1363 O ASP 336 50.686 18.259 23.733 1.00 32.08
ATOM 1364 N LYS 337 48.858 19.532 24.100 1.00 33.78
ATOM 1365 CA LYS 337 48.797 20.040 22.731 1.00 28.00
ATOM 1366 CB LYS 337 47.626 21.022 22.574 1.00 22.46
ATOM 1367 C LYS 337 50.116 20.704 22.334 1.00 29.06

ATOM 1368 O LYS 337 50.607 20.512 21.220 1.00 28.41
ATOM 1369 N ILE 338 50.705 21.449 23.267 1.00 27.56
ATOM 1370 CA ILE 338 51.964 22.138 23.022 1.00 25.03
ATOM 1371 CB ILE 338 52.274 23.149 24.144 1.00 19.49
ATOM 1372 CG2 ILE 338 53.577 23.876 23.859 1.00 19.00
ATOM 1373 CG1 ILE 338 51.135 24.167 24.232 1.00 21.97
ATOM 1374 CD1 ILE 338 51.277 25.175 25.348 1.00 26.67
ATOM 1375 C ILE 338 53.119 21.153 22.826 1.00 29.97
ATOM 1376 O ILE 338 53.935 21.328 21.914 1.00 31.00
ATOM 1377 N GLU 339 53.165 20.100 23.642 1.00 33.52
ATOM 1378 CA GLU 339 54.213 19.080 23.516 1.00 35.34
ATOM 1379 CB GLU 339 54.136 18.062 24.659 1.00 39.97
ATOM 1380 CG GLU 339 54.653 18.585 25.986 1.00 53.23
ATOM 1381 CD GLU 339 54.549 17.579 27.126 1.00 61.16
ATOM 1382 OE1 GLU 339 53.602 16.759 27.131 1.00 64.30
ATOM 1383 OE2 GLU 339 55.412 17.622 28.031 1.00 57.76
ATOM 1384 C GLU 339 54.091 18.353 22.178 1.00 31.63
ATOM 1385 O GLU 339 55.086 18.123 21.491 1.00 28.96
ATOM 1386 N LYS 340 52.861 18.006 21.810 1.00 30.95
ATOM 1387 CA LYS 340 52.602 17.313 20.554 1.00 31.58
ATOM 1388 CB LYS 340 51.121 16.966 20.438 1.00 31.83
ATOM 1389 C LYS 340 53.057 18.159 19.358 1.00 29.84
ATOM 1390 O LYS 340 53.696 17.640 18.438 1.00 31.58
ATOM 1391 N SER 341 52.765 19.460 19.388 1.00 25.33
ATOM 1392 CA SER 341 53.165 20.351 18.297 1.00 23.92
ATOM 1393 CB SER 341 52.468 21.707 18.400 1.00 24.02
ATOM 1394 OG SER 341 52.700 22.302 19.657 1.00 48.88
ATOM 1395 C SER 341 54.677 20.533 18.240 1.00 24.39
ATOM 1396 O SER 341 55.254 20.593 17.150 1.00 24.71
ATOM 1397 N GLN 342 55.324 20.606 19.405 1.00 25.45
ATOM 1398 CA GLN 342 56.777 20.751 19.437 1.00 26.66
ATOM 1399 CB GLN 342 57.311 20.975 20.853 1.00 22.77
ATOM 1400 CG GLN 342 58.805 21.307 20.840 1.00 25.76
ATOM 1401 CD GLN 342 59.427 21.371 22.214 1.00 28.46
ATOM 1402 OE1 GLN 342 59.342 20.422 22.990 1.00 34.22
ATOM 1403 NE2 GLN 342 60.080 22.483 22.517 1.00 30.01
ATOM 1404 C GLN 342 57.425 19.504 18.843 1.00 23.37
ATOM 1405 O GLN 342 58.414 19.598 18.106 1.00 23.65
ATOM 1406 N GLU 343 56.864 18.340 19.162 1.00 21.48
ATOM 1407 CA GLU 343 57.370 17.076 18.641 1.00 20.74
ATOM 1408 CB GLU 343 56.599 15.902 19.247 1.00 22.09
ATOM 1409 C GLU 343 57.225 17.094 17.119 1.00 19.18
ATOM 1410 O GLU 343 58.156 16.743 16.393 1.00 21.11
ATOM 1411 N ALA 344 56.077 17.570 16.648 1.00 19.93
ATOM 1412 CA ALA 344 55.803 17.662 15.217 1.00 20.20
ATOM 1413 CB ALA 344 54.411 18.216 14.989 1.00 16.46
ATOM 1414 C ALA 344 56.850 18.539 14.528 1.00 20.75

ATOM 1415 O ALA 344 57.432 18.140 13.514 1.00 25.13
ATOM 1416 N TYR 345 57.105 19.722 15.088 1.00 21.31
ATOM 1417 CA TYR 345 58.107 20.631 14.531 1.00 15.93
ATOM 1418 CB TYR 345 58.127 21.969 15.282 1.00 17.29
ATOM 1419 CG TYR 345 57.049 22.927 14.833 1.00 16.11
ATOM 1420 CD1 TYR 345 56.017 23.296 15.689 1.00 9.93
ATOM 1421 CE1 TYR 345 54.999 24.138 15.263 1.00 16.95
ATOM 1422 CD2 TYR 345 57.041 23.431 13.531 1.00 19.84
ATOM 1423 CE2 TYR 345 56.026 24.276 13.094 1.00 17.13
ATOM 1424 CZ TYR 345 55.005 24.622 13.963 1.00 18.12
ATOM 1425 OH TYR 345 53.980 25.430 13.530 1.00 26.25
ATOM 1426 C TYR 345 59.493 20.008 14.554 1.00 20.65
ATOM 1427 O TYR 345 60.240 20.129 13.583 1.00 20.75
ATOM 1428 N LEU 346 59.832 19.337 15.655 1.00 22.14
ATOM 1429 CA LEU 346 61.134 18.684 15.803 1.00 19.43
ATOM 1430 CB LEU 346 61.267 18.041 17.186 1.00 19.92
ATOM 1431 CG LEU 346 61.683 18.945 18.347 1.00 25.56
ATOM 1432 CD1 LEU 346 61.440 18.244 19.677 1.00 22.06
ATOM 1433 CD2 LEU 346 63.147 19.332 18.197 1.00 17.62
ATOM 1434 C LEU 346 61.359 17.635 14.723 1.00 19.30
ATOM 1435 O LEU 346 62.441 17.560 14.142 1.00 22.84
ATOM 1436 N LEU 347 60.337 16.826 14.456 1.00 25.17
ATOM 1437 CA LEU 347 60.423 15.790 13.427 1.00 24.55
ATOM 1438 CB LEU 347 59.187 14.892 13.453 1.00 25.47
ATOM 1439 CG LEU 347 59.256 13.654 14.345 1.00 30.65
ATOM 1440 CD1 LEU 347 57.941 12.890 14.258 1.00 34.28
ATOM 1441 CD2 LEU 347 60.416 12.765 13.908 1.00 28.26
ATOM 1442 C LEU 347 60.584 16.400 12.042 1.00 24.00
ATOM 1443 O LEU 347 61.399 15.932 11.245 1.00 29.74
ATOM 1444 N ALA 348 59.809 17.443 11.761 1.00 22.72
ATOM 1445 CA ALA 348 59.875 18.125 10.475 1.00 19.19
ATOM 1446 CB ALA 348 58.789 19.188 10.388 1.00 22.73
ATOM 1447 C ALA 348 61.246 18.762 10.316 1.00 20.34
ATOM 1448 O ALA 348 61.881 18.633 9.274 1.00 23.94
ATOM 1449 N PHE 349 61.707 19.402 11.388 1.00 22.19
ATOM 1450 CA PHE 349 63.001 20.078 11.435 1.00 19.41
ATOM 1451 CB PHE 349 63.185 20.701 12.832 1.00 17.45
ATOM 1452 CG PHE 349 64.371 21.632 12.963 1.00 18.70
ATOM 1453 CD1 PHE 349 65.183 21.943 11.874 1.00 19.09
ATOM 1454 CD2 PHE 349 64.669 22.203 14.199 1.00 21.81
ATOM 1455 CE1 PHE 349 66.270 22.811 12.012 1.00 21.49
ATOM 1456 CE2 PHE 349 65.753 23.072 14.351 1.00 18.58
ATOM 1457 CZ PHE 349 66.555 23.376 13.256 1.00 18.67
ATOM 1458 C PHE 349 64.110 19.071 11.136 1.00 20.96
ATOM 1459 O PHE 349 64.967 19.311 10.283 1.00 25.19
ATOM 1460 N GLU 350 64.076 17.935 11.824 1.00 23.96
ATOM 1461 CA GLU 350 65.077 16.888 11.642 1.00 27.98

ATOM 1462 CB GLU 350 64.794 15.721 12.591 1.00 28.90
ATOM 1463 CG GLU 350 65.738 14.542 12.413 1.00 39.36
ATOM 1464 CD GLU 350 65.603 13.497 13.505 1.00 41.62
ATOM 1465 OE1 GLU 350 64.475 13.260 13.988 1.00 43.67
ATOM 1466 OE2 GLU 350 66.636 12.908 13.876 1.00 49.64
ATOM 1467 C- GLU 350 65.100 16.385 10.203 1.00 27.12
ATOM 1468 O GLU 350 66.158 16.288 9.577 1.00 27.44
ATOM 1469 N HIS 351 63.918 16.088 9.678 1.00 27.36
ATOM 1470 CA HIS 351 63.787 15.591 8.318 1.00 23.97
ATOM 1471 CB HIS 351 62.366 15.087 8.090 1.00 22.89
ATOM 1472 CG HIS 351 61.991 13.945 8.986 1.00 24.58
ATOM 1473 CD2 HIS 351 62.736 13.209 9.846 1.00 25.83
ATOM 1474 ND1 HIS 351 60.709 13.448 9.073 1.00 26.50
ATOM 1475 CE1 HIS 351 60.677 12.460 9.948 1.00 24.81
ATOM 1476 NE2 HIS 351 61.896 12.295 10.431 1.00 28.42
ATOM 1477 C HIS 351 64.200 16.635 7.278 1.00 24.22
ATOM 1478 O HIS 351 64.757 16.287 6.236 1.00 25.79
ATOM 1479 N TYR 352 63.969 17.912 7.572 1.00 21.04
ATOM 1480 CA TYR 352 64.363 18.974 6.654 1.00 18.98
ATOM 1481 CB TYR 352 63.770 20.321 7.067 1.00 17.08
ATOM 1482 CG TYR 352 64.127 21.413 6.090 1.00 21.83
ATOM 1483 CD1 TYR 352 63.537 21.467 4.828 1.00 20.07
ATOM 1484 CE1 TYR 352 63.941 22.411 3.883 1.00 23.51
ATOM 1485 CD2 TYR 352 65.121 22.339 6.388 1.00 19.94
ATOM 1486 CE2 TYR 352 65.531 23.284 5.452 1.00 20.85
ATOM 1487 CZ TYR 352 64.942 23.313 4.203 1.00 24.80
ATOM 1488 OH TYR 352 65.380 24.221 3.269 1.00 26.74
ATOM 1489 C TYR 352 65.889 19.055 6.624 1.00 20.58
ATOM 1490 O TYR 352 66.492 19.276 5.570 1.00 22.72
ATOM 1491 N VAL 353 66.508 18.877 7.789 1.00 28.34
ATOM 1492 CA VAL 353 67.967 18.892 7.904 1.00 22.38
ATOM 1493 CB VAL 353 68.419 18.755 9.389 1.00 26.46
ATOM 1494 CG1 VAL 353 69.915 18.527 9.478 1.00 20.92
ATOM 1495 CG2 VAL 353 68.053 20.009 10.165 1.00 22.46
ATOM 1496 C VAL 353 68.518 17.725 7.078 1.00 23.51
ATOM 1497 O VAL 353 69.535 17.865 6.391 1.00 24.73
ATOM 1498 N ASN 354 67.850 16.575 7.158 1.00 20.93
ATOM 1499 CA ASN 354 68.252 15.392 6.397 1.00 27.25
ATOM 1500 CB ASN 354 67.320 14.210 6.680 1.00 28.43
ATOM 1501 CG ASN 354 67.521 13.607 8.058 1.00 31.50
ATOM 1502 OD1 ASN 354 68.565 13.787 8.692 1.00 37.79
ATOM 1503 ND2 ASN 354 66.521 12.867 8.524 1.00 26.44
ATOM 1504 C ASN 354 68.182 15.721 4.908 1.00 31.27
ATOM 1505 O ASN 354 69.066 15.347 4.134 1.00 34.22
ATOM 1506 N HIS 355 67.124 16.429 4.520 1.00 30.49
ATOM 1507 CA HIS 355 66.917 16.826 3.132 1.00 26.88
ATOM 1508 CB HIS 355 65.548 17.494 2.975 1.00 27.27

```
ATOM  1509  CG  HIS  355      65.319  18.103   1.625  1.00 37.76
ATOM  1510  CD2 HIS  355      65.439  19.382   1.196  1.00 35.28
ATOM  1511  ND1 HIS  355      64.913  17.369   0.532  1.00 34.93
ATOM  1512  CE1 HIS  355      64.789  18.169  -0.513  1.00 34.84
ATOM  1513  NE2 HIS  355      65.104  19.394  -0.135  1.00 33.13
ATOM  1514  C· HIS  355      68.016  17.748   2.610  1.00 24.66
ATOM  1515  O   HIS  355      68.420  17.630   1.456  1.00 26.62
ATOM  1516  N   ARG  356      68.487  18.670   3.448  1.00 25.86
ATOM  1517  CA  ARG  356      69.536  19.608   3.040  1.00 26.94
ATOM  1518  CB  ARG  356      69.620  20.791   3.996  1.00 20.57
ATOM  1519  CG  ARG  356      68.453  21.727   3.899  1.00 19.69
ATOM  1520  CD  ARG  356      68.866  23.110   4.340  1.00 23.81
ATOM  1521  NE  ARG  356      69.768  23.746   3.388  1.00 23.14
ATOM  1522  CZ  ARG  356      70.641  24.697   3.702  1.00 24.11
ATOM  1523  NH1 ARG  356      70.755  25.129   4.949  1.00 26.29
ATOM  1524  NH2 ARG  356      71.384  25.242   2.754  1.00 32.79
ATOM  1525  C   ARG  356      70.921  19.002   2.875  1.00 29.38
ATOM  1526  O   ARG  356      71.795  19.607   2.257  1.00 32.91
ATOM  1527  N   LYS  357      71.133  17.848   3.498  1.00 33.39
ATOM  1528  CA  LYS  357      72.401  17.128   3.417  1.00 35.97
ATOM  1529  CB  LYS  357      72.479  16.363   2.089  1.00 40.55
ATOM  1530  CG  LYS  357      71.327  15.381   1.891  1.00 44.03
ATOM  1531  CD  LYS  357      71.360  14.722   0.523  1.00 52.31
ATOM  1532  CE  LYS  357      70.171  13.787   0.343  1.00 56.99
ATOM  1533  NZ  LYS  357      70.208  13.085  -0.970  1.00 64.78
ATOM  1534  C   LYS  357      73.657  17.981   3.629  1.00 38.55
ATOM  1535  O   LYS  357      74.518  18.079   2.748  1.00 42.50
ATOM  1536  N   HIS  358      73.751  18.601   4.802  1.00 35.00
ATOM  1537  CA  HIS  358      74.906  19.418   5.155  1.00 32.94
ATOM  1538  CB  HIS  358      74.732  20.018   6.552  1.00 27.62
ATOM  1539  CG  HIS  358      73.669  21.067   6.643  1.00 26.64
ATOM  1540  CD2 HIS  358      72.330  20.968   6.819  1.00 20.85
ATOM  1541  ND1 HIS  358      73.950  22.416   6.587  1.00 24.71
ATOM  1542  CE1 HIS  358      72.831  23.103   6.724  1.00 21.02
ATOM  1543  NE2 HIS  358      71.834  22.248   6.865  1.00 21.42
ATOM  1544  C   HIS  358      76.140  18.520   5.176  1.00 36.60
ATOM  1545  O   HIS  358      76.072  17.379   5.635  1.00 38.73
ATOM  1546  N   ASN  359      77.267  19.037   4.702  1.00 41.40
ATOM  1547  CA  ASN  359      78.515  18.277   4.689  1.00 45.02
ATOM  1548  CB  ASN  359      79.441  18.799   3.587  1.00 42.57
ATOM  1549  C   ASN  359      79.193  18.386   6.058  1.00 46.59
ATOM  1550  O   ASN  359      80.405  18.588   6.150  1.00 52.31
ATOM  1551  N   ILE  360      78.400  18.254   7.117  1.00 45.14
ATOM  1552  CA  ILE  360      78.896  18.348   8.487  1.00 43.69
ATOM  1553  CB  ILE  360      78.330  19.597   9.207  1.00 40.08
ATOM  1554  CG2 ILE  360      78.824  19.657  10.645  1.00 32.11
ATOM  1555  CG1 ILE  360      78.733  20.864   8.452  1.00 41.47
```

```
ATOM   1556  CD1 ILE  360      78.057  22.115   8.954  1.00 44.93
ATOM   1557  C   ILE  360      78.452  17.101   9.242  1.00 43.63
ATOM   1558  O   ILE  360      77.257  16.797   9.313  1.00 45.20
ATOM   1559  N   PRO  361      79.413  16.337   9.780  1.00 43.91
ATOM   1560  CD  PRO  361      80.871  16.540   9.699  1.00 47.07
ATOM   1561  CA  PRO  361      79.087  15.118  10.526  1.00 41.66
ATOM   1562  CB  PRO  361      80.462  14.495  10.782  1.00 43.73
ATOM   1563  CG  PRO  361      81.383  15.679  10.830  1.00 45.45
ATOM   1564  C   PRO  361      78.332  15.403  11.832  1.00 36.42
ATOM   1565  O   PRO  361      78.679  16.325  12.572  1.00 35.74
ATOM   1566  N   HIS  362      77.291  14.610  12.088  1.00 33.14
ATOM   1567  CA  HIS  362      76.462  14.726  13.292  1.00 34.09
ATOM   1568  CB  HIS  362      77.288  14.413  14.547  1.00 33.82
ATOM   1569  CG  HIS  362      78.132  13.181  14.424  1.00 36.04
ATOM   1570  CD2 HIS  362      77.793  11.885  14.224  1.00 34.77
ATOM   1571  ND1 HIS  362      79.509  13.212  14.482  1.00 37.16
ATOM   1572  CE1 HIS  362      79.983  11.990  14.325  1.00 37.16
ATOM   1573  NE2 HIS  362      78.962  11.165  14.167  1.00 40.13
ATOM   1574  C   HIS  362      75.829  16.110  13.417  1.00 31.00
ATOM   1575  O   HIS  362      75.617  16.608  14.525  1.00 30.22
ATOM   1576  N   PHE  363      75.478  16.690  12.272  1.00 33.06
ATOM   1577  CA  PHE  363      74.878  18.021  12.200  1.00 28.08
ATOM   1578  CB  PHE  363      74.503  18.355  10.747  1.00 25.26
ATOM   1579  CG  PHE  363      73.923  19.733  10.567  1.00 24.91
ATOM   1580  CD1 PHE  363      74.750  20.817  10.320  1.00 27.60
ATOM   1581  CD2 PHE  363      72.552  19.948  10.664  1.00 25.52
ATOM   1582  CE1 PHE  363      74.221  22.100  10.175  1.00 29.70
ATOM   1583  CE2 PHE  363      72.014  21.227  10.522  1.00 25.88
ATOM   1584  CZ  PHE  363      72.850  22.304  10.278  1.00 21.49
ATOM   1585  C   PHE  363      73.659  18.201  13.099  1.00 23.79
ATOM   1586  O   PHE  363      73.587  19.164  13.863  1.00 24.48
ATOM   1587  N   TRP  364      72.707  17.277  13.012  1.00 23.13
ATOM   1588  CA  TRP  364      71.484  17.369  13.805  1.00 25.06
ATOM   1589  CB  TRP  364      70.536  16.201  13.494  1.00 21.17
ATOM   1590  CG  TRP  364      69.247  16.220  14.271  1.00 23.14
ATOM   1591  CD2 TRP  364      68.261  17.266  14.296  1.00 27.68
ATOM   1592  CE2 TRP  364      67.229  16.845  15.165  1.00 28.31
ATOM   1593  CE3 TRP  364      68.149  18.517  13.671  1.00 26.46
ATOM   1594  CD1 TRP  364      68.784  15.241  15.096  1.00 23.76
ATOM   1595  NE1 TRP  364      67.576  15.607  15.637  1.00 32.12
ATOM   1596  CZ2 TRP  364      66.100  17.628  15.427  1.00 25.63
ATOM   1597  CZ3 TRP  364      67.028  19.294  13.931  1.00 25.55
ATOM   1598  CH2 TRP  364      66.017  18.845  14.803  1.00 29.79
ATOM   1599  C   TRP  364      71.715  17.531  15.312  1.00 27.80
ATOM   1600  O   TRP  364      71.212  18.486  15.904  1.00 26.96
ATOM   1601  N   PRO  365      72.458  16.605  15.955  1.00 30.69
ATOM   1602  CD  PRO  365      72.974  15.308  15.481  1.00 31.45
```

```
ATOM  1603  CA  PRO  365      72.687  16.757  17.397  1.00 27.97
ATOM  1604  CB  PRO  365      73.506  15.512  17.752  1.00 26.50
ATOM  1605  CG  PRO  365      73.057  14.509  16.757  1.00 33.47
ATOM  1606  C   PRO  365      73.457  18.043  17.709  1.00 27.10
ATOM  1607  O   PRO  365      73.154  18.736  18.681  1.00 26.88
ATOM  1608  N   LYS  366      74.440  18.365  16.873  1.00 26.99
ATOM  1609  CA  LYS  366      75.230  19.577  17.061  1.00 30.69
ATOM  1610  CB  LYS  366      76.275  19.708  15.957  1.00 28.53
ATOM  1611  CG  LYS  366      77.481  18.804  16.106  1.00 28.89
ATOM  1612  CD  LYS  366      78.430  19.027  14.939  1.00 32.51
ATOM  1613  CE  LYS  366      79.743  18.294  15.116  1.00 38.52
ATOM  1614  NZ  LYS  366      80.632  18.506  13.939  1.00 45.28
ATOM  1615  C   LYS  366      74.349  20.831  17.079  1.00 36.18
ATOM  1616  O   LYS  366      74.472  21.672  17.972  1.00 39.82
ATOM  1617  N   LEU  367      73.464  20.950  16.091  1.00 37.54
ATOM  1618  CA  LEU  367      72.557  22.092  15.994  1.00 36.14
ATOM  1619  CB  LEU  367      71.803  22.070  14.659  1.00 32.20
ATOM  1620  CG  LEU  367      70.764  23.179  14.447  1.00 36.16
ATOM  1621  CD1 LEU  367      71.402  24.567  14.618  1.00 20.60
ATOM  1622  CD2 LEU  367      70.139  23.030  13.065  1.00 34.30
ATOM  1623  C   LEU  367      71.561  22.060  17.143  1.00 36.84
ATOM  1624  O   LEU  367      71.231  23.091  17.729  1.00 36.94
ATOM  1625  N   LEU  368      71.083  20.866  17.459  1.00 37.81
ATOM  1626  CA  LEU  368      70.130  20.683  18.536  1.00 34.83
ATOM  1627  CB  LEU  368      69.763  19.205  18.622  1.00 36.98
ATOM  1628  CG  LEU  368      68.421  18.777  19.205  1.00 40.34
ATOM  1629  CD1 LEU  368      67.276  19.595  18.619  1.00 36.28
ATOM  1630  CD2 LEU  368      68.241  17.299  18.908  1.00 39.39
ATOM  1631  C   LEU  368      70.755  21.182  19.843  1.00 38.32
ATOM  1632  O   LEU  368      70.059  21.711  20.707  1.00 41.87
ATOM  1633  N   MET  369      72.075  21.057  19.962  1.00 39.46
ATOM  1634  CA  MET  369      72.790  21.515  21.154  1.00 40.12
ATOM  1635  CB  MET  369      74.219  20.971  21.168  1.00 41.26
ATOM  1636  CG  MET  369      74.307  19.493  21.521  1.00 47.83
ATOM  1637  SD  MET  369      75.961  18.810  21.289  1.00 55.72
ATOM  1638  CE  MET  369      76.809  19.474  22.727  1.00 54.37
ATOM  1639  C   MET  369      72.805  23.039  21.251  1.00 42.81
ATOM  1640  O   MET  369      72.990  23.601  22.335  1.00 47.81
ATOM  1641  N   LYS  370      72.622  23.708  20.115  1.00 40.09
ATOM  1642  CA  LYS  370      72.588  25.165  20.080  1.00 33.65
ATOM  1643  CB  LYS  370      72.751  25.677  18.650  1.00 30.83
ATOM  1644  CG  LYS  370      74.138  25.435  18.078  1.00 30.98
ATOM  1645  CD  LYS  370      75.188  26.198  18.867  1.00 37.82
ATOM  1646  CE  LYS  370      76.591  25.938  18.351  1.00 36.05
ATOM  1647  NZ  LYS  370      77.034  24.562  18.667  1.00 48.68
ATOM  1648  C   LYS  370      71.293  25.684  20.702  1.00 33.32
ATOM  1649  O   LYS  370      71.218  26.842  21.112  1.00 34.75
```

```
ATOM   1650  N   VAL   371      70.277  24.826  20.779  1.00 31.90
ATOM   1651  CA  VAL   371      69.006  25.197  21.395  1.00 31.77
ATOM   1652  CB  VAL   371      67.933  24.092  21.214  1.00 30.28
ATOM   1653  CG1 VAL   371      66.673  24.429  21.995  1.00 30.02
ATOM   1654  CG2 VAL   371      67.596  23.933  19.746  1.00 32.23
ATOM   1655  C-  VAL   371      69.277  25.417  22.885  1.00 34.44
ATOM   1656  O   VAL   371      68.722  26.331  23.499  1.00 33.35
ATOM   1657  N   THR   372      70.161  24.590  23.443  1.00 33.15
ATOM   1658  CA  THR   372      70.551  24.675  24.847  1.00 32.47
ATOM   1659  CB  THR   372      71.541  23.556  25.207  1.00 32.11
ATOM   1660  OG1 THR   372      70.955  22.288  24.891  1.00 35.33
ATOM   1661  CG2 THR   372      71.894  23.603  26.688  1.00 32.54
ATOM   1662  C   THR   372      71.226  26.020  25.108  1.00 34.49
ATOM   1663  O   THR   372      70.936  26.696  26.099  1.00 34.07
ATOM   1664  N   ASP   373      72.120  26.405  24.202  1.00 32.77
ATOM   1665  CA  ASP   373      72.830  27.671  24.315  1.00 28.08
ATOM   1666  CB  ASP   373      73.803  27.841  23.147  1.00 31.59
ATOM   1667  CG  ASP   373      74.910  26.789  23.142  1.00 37.29
ATOM   1668  OD1 ASP   373      75.170  26.169  24.196  1.00 40.82
ATOM   1669  OD2 ASP   373      75.531  26.586  22.079  1.00 40.81
ATOM   1670  C   ASP   373      71.830  28.821  24.353  1.00 29.21
ATOM   1671  O   ASP   373      71.931  29.709  25.200  1.00 31.85
ATOM   1672  N   LEU   374      70.843  28.775  23.463  1.00 24.71
ATOM   1673  CA  LEU   374      69.813  29.802  23.403  1.00 25.25
ATOM   1674  CB  LEU   374      68.906  29.587  22.188  1.00 25.61
ATOM   1675  CG  LEU   374      69.480  30.084  20.858  1.00 25.51
ATOM   1676  CD1 LEU   374      68.741  29.469  19.677  1.00 23.53
ATOM   1677  CD2 LEU   374      69.405  31.596  20.820  1.00 21.92
ATOM   1678  C   LEU   374      68.994  29.827  24.686  1.00 26.84
ATOM   1679  O   LEU   374      68.591  30.895  25.151  1.00 28.96
ATOM   1680  N   ARG   375      68.746  28.651  25.254  1.00 31.00
ATOM   1681  CA  ARG   375      67.996  28.554  26.502  1.00 32.86
ATOM   1682  CB  ARG   375      67.831  27.090  26.924  1.00 36.80
ATOM   1683  CG  ARG   375      66.861  26.297  26.071  1.00 44.91
ATOM   1684  CD  ARG   375      65.433  26.731  26.338  1.00 58.99
ATOM   1685  NE  ARG   375      64.501  26.210  25.342  1.00 72.26
ATOM   1686  CZ  ARG   375      63.909  25.020  25.404  1.00 77.46
ATOM   1687  NH1 ARG   375      64.147  24.201  26.422  1.00 80.94
ATOM   1688  NH2 ARG   375      63.062  24.657  24.447  1.00 75.58
ATOM   1689  C   ARG   375      68.771  29.317  27.570  1.00 32.27
ATOM   1690  O   ARG   375      68.199  30.125  28.304  1.00 33.75
ATOM   1691  N   MET   376      70.084  29.098  27.602  1.00 32.65
ATOM   1692  CA  MET   376      70.967  29.753  28.560  1.00 35.83
ATOM   1693  CB  MET   376      72.392  29.210  28.434  1.00 39.25
ATOM   1694  CG  MET   376      72.526  27.751  28.839  1.00 54.45
ATOM   1695  SD  MET   376      74.245  27.212  28.944  1.00 73.93
ATOM   1696  CE  MET   376      74.421  26.270  27.434  1.00 67.01
```

```
ATOM  1697  C   MET  376     70.960  31.267  28.378  1.00 35.38
ATOM  1698  O   MET  376     70.882  32.015  29.353  1.00 34.73
ATOM  1699  N   ILE  377     71.038  31.716  27.129  1.00 32.51
ATOM  1700  CA  ILE  377     71.016  33.142  26.816  1.00 26.55
ATOM  1701  CB  ILE  377     71.182  33.370  25.299  1.00 24.84
ATOM  1702  CG2 ILE  377     70.817  34.797  24.923  1.00 26.63
ATOM  1703  CG1 ILE  377     72.616  33.038  24.890  1.00 20.66
ATOM  1704  CD1 ILE  377     72.872  33.104  23.409  1.00 20.74
ATOM  1705  C   ILE  377     69.706  33.755  27.313  1.00 25.47
ATOM  1706  O   ILE  377     69.696  34.848  27.881  1.00 29.99
ATOM  1707  N   GLY  378     68.608  33.033  27.127  1.00 25.11
ATOM  1708  CA  GLY  378     67.321  33.522  27.580  1.00 27.82
ATOM  1709  C   GLY  378     67.279  33.613  29.095  1.00 30.90
ATOM  1710  O   GLY  378     66.749  34.579  29.651  1.00 31.19
ATOM  1711  N   ALA  379     67.851  32.611  29.761  1.00 31.62
ATOM  1712  CA  ALA  379     67.896  32.547  31.223  1.00 30.74
ATOM  1713  CB  ALA  379     68.433  31.198  31.671  1.00 30.82
ATOM  1714  C   ALA  379     68.756  33.668  31.801  1.00 30.07
ATOM  1715  O   ALA  379     68.327  34.384  32.708  1.00 31.05
ATOM  1716  N   CYA  380     69.966  33.817  31.273  1.00 29.72
ATOM  1717  CA  CYA  380     70.873  34.866  31.723  1.00 33.36
ATOM  1718  CB  CYA  380     72.201  34.809  30.963  1.00 38.31
ATOM  1719  SG  CYA  380     73.249  33.407  31.386  1.00 50.99
ATOM  1720  AS  CYA  380     74.982  33.655  29.929  1.00 70.37
ATOM  1721  C   CYA  380     70.226  36.232  31.535  1.00 33.40
ATOM  1722  O   CYA  380     70.246  37.062  32.442  1.00 36.41
ATOM  1723  N   HIS  381     69.615  36.456  30.374  1.00 32.55
ATOM  1724  CA  HIS  381     68.965  37.734  30.114  1.00 26.41
ATOM  1725  CB  HIS  381     68.434  37.811  28.681  1.00 20.89
ATOM  1726  CG  HIS  381     67.593  39.023  28.423  1.00 15.78
ATOM  1727  CD2 HIS  381     67.928  40.277  28.041  1.00 12.67
ATOM  1728  ND1 HIS  381     66.226  39.031  28.605  1.00 17.88
ATOM  1729  CE1 HIS  381     65.756  40.239  28.353  1.00 16.27
ATOM  1730  NE2 HIS  381     66.768  41.013  28.008  1.00 17.18
ATOM  1731  C   HIS  381     67.839  38.023  31.102  1.00 26.73
ATOM  1732  O   HIS  381     67.621  39.176  31.464  1.00 30.46
ATOM  1733  N   ALA  382     67.111  36.991  31.521  1.00 26.68
ATOM  1734  CA  ALA  382     66.010  37.176  32.464  1.00 27.90
ATOM  1735  CB  ALA  382     65.237  35.878  32.642  1.00 25.29
ATOM  1736  C   ALA  382     66.511  37.697  33.810  1.00 31.23
ATOM  1737  O   ALA  382     65.927  38.617  34.378  1.00 37.67
ATOM  1738  N   SER  383     67.596  37.114  34.316  1.00 34.15
ATOM  1739  CA  SER  383     68.174  37.550  35.588  1.00 37.23
ATOM  1740  CB  SER  383     69.294  36.605  36.027  1.00 40.21
ATOM  1741  OG  SER  383     68.785  35.324  36.361  1.00 53.99
ATOM  1742  C   SER  383     68.727  38.958  35.417  1.00 33.67
ATOM  1743  O   SER  383     68.532  39.827  36.268  1.00 40.73
```

ATOM 1744 N ARG 384 69.411 39.171 34.298 1.00 29.95
ATOM 1745 CA ARG 384 70.000 40.458 33.957 1.00 29.77
ATOM 1746 CB ARG 384 70.684 40.350 32.594 1.00 30.79
ATOM 1747 CG ARG 384 71.481 41.558 32.167 1.00 31.34
ATOM 1748 CD ARG 384 72.781 41.638 32.918 1.00 33.62
ATOM 1749 NE ARG 384 73.657 42.660 32.358 1.00 41.68
ATOM 1750 CZ ARG 384 74.584 43.310 33.052 1.00 41.20
ATOM 1751 NH1 ARG 384 74.756 43.047 34.339 1.00 42.11
ATOM 1752 NH2 ARG 384 75.349 44.213 32.455 1.00 37.27
ATOM 1753 C ARG 384 68.910 41.536 33.911 1.00 35.72
ATOM 1754 O ARG 384 69.090 42.635 34.439 1.00 41.66
ATOM 1755 N PHE 385 67.768 41.196 33.318 1.00 34.30
ATOM 1756 CA PHE 385 66.646 42.119 33.199 1.00 32.40
ATOM 1757 CB PHE 385 65.527 41.502 32.356 1.00 29.02
ATOM 1758 CG PHE 385 64.344 42.407 32.163 1.00 26.56
ATOM 1759 CD1 PHE 385 64.317 43.320 31.119 1.00 26.59
ATOM 1760 CD2 PHE 385 63.263 42.355 33.037 1.00 24.69
ATOM 1761 CE1 PHE 385 63.231 44.173 30.947 1.00 31.70
ATOM 1762 CE2 PHE 385 62.174 43.202 32.875 1.00 26.79
ATOM 1763 CZ PHE 385 62.158 44.115 31.827 1.00 31.59
ATOM 1764 C PHE 385 66.121 42.492 34.578 1.00 32.98
ATOM 1765 O PHE 385 65.822 43.659 34.839 1.00 33.91
ATOM 1766 N LEU 386 66.003 41.499 35.456 1.00 33.91
ATOM 1767 CA LEU 386 65.533 41.736 36.818 1.00 38.66
ATOM 1768 CB LEU 386 65.547 40.440 37.633 1.00 43.79
ATOM 1769 CG LEU 386 64.327 39.521 37.525 1.00 49.81
ATOM 1770 CD1 LEU 386 64.652 38.147 38.099 1.00 51.12
ATOM 1771 CD2 LEU 386 63.135 40.148 38.246 1.00 49.17
ATOM 1772 C LEU 386 66.445 42.761 37.475 1.00 38.95
ATOM 1773 O LEU 386 65.979 43.682 38.146 1.00 42.16
ATOM 1774 N HIS 387 67.745 42.613 37.248 1.00 33.62
ATOM 1775 CA HIS 387 68.723 43.531 37.808 1.00 39.73
ATOM 1776 CB HIS 387 70.138 42.980 37.639 1.00 40.71
ATOM 1777 CG HIS 387 70.403 41.749 38.449 1.00 52.03
ATOM 1778 CD2 HIS 387 69.573 40.967 39.181 1.00 53.85
ATOM 1779 ND1 HIS 387 71.657 41.189 38.566 1.00 54.79
ATOM 1780 CE1 HIS 387 71.590 40.114 39.334 1.00 56.55
ATOM 1781 NE2 HIS 387 70.336 39.958 39.720 1.00 57.48
ATOM 1782 C HIS 387 68.594 44.913 37.175 1.00 42.08
ATOM 1783 O HIS 387 68.712 45.926 37.865 1.00 44.12
ATOM 1784 N MET 388 68.318 44.957 35.874 1.00 42.38
ATOM 1785 CA MET 388 68.154 46.229 35.175 1.00 38.00
ATOM 1786 CB MET 388 67.840 46.006 33.692 1.00 40.21
ATOM 1787 CG MET 388 69.009 45.555 32.829 1.00 41.26
ATOM 1788 SD MET 388 68.500 45.427 31.089 1.00 45.51
ATOM 1789 CE MET 388 69.089 43.802 30.645 1.00 42.40
ATOM 1790 C MET 388 67.025 47.044 35.810 1.00 38.11

```
ATOM  1791  O   MET  388      67.155  48.255  35.997  1.00 38.41
ATOM  1792  N   LYS  389      65.926  46.374  36.144  1.00 39.67
ATOM  1793  CA  LYS  389      64.773  47.036  36.750  1.00 44.96
ATOM  1794  CB  LYS  389      63.570  46.087  36.818  1.00 49.52
ATOM  1795  CG  LYS  389      62.674  46.102  35.588  1.00 56.74
ATOM  1796  CD  LYS  389      62.145  47.509  35.278  1.00 68.05
ATOM  1797  CE  LYS  389      61.287  48.100  36.403  1.00 71.47
ATOM  1798  NZ  LYS  389      60.038  47.330  36.661  1.00 71.98
ATOM  1799  C   LYS  389      65.041  47.604  38.141  1.00 46.60
ATOM  1800  O   LYS  389      64.516  48.661  38.499  1.00 47.25
ATOM  1801  N   VAL  390      65.832  46.893  38.935  1.00 47.15
ATOM  1802  CA  VAL  390      66.129  47.353  40.284  1.00 50.75
ATOM  1803  CB  VAL  390      66.686  46.202  41.182  1.00 50.42
ATOM  1804  CG1 VAL  390      68.095  45.802  40.770  1.00 47.93
ATOM  1805  CG2 VAL  390      66.650  46.612  42.640  1.00 56.67
ATOM  1806  C   VAL  390      67.072  48.558  40.286  1.00 49.82
ATOM  1807  O   VAL  390      66.971  49.426  41.152  1.00 52.44
ATOM  1808  N   GLU  391      67.926  48.651  39.272  1.00 46.14
ATOM  1809  CA  GLU  391      68.888  49.741  39.173  1.00 43.84
ATOM  1810  CB  GLU  391      70.150  49.268  38.449  1.00 41.44
ATOM  1811  CG  GLU  391      70.837  48.074  39.095  1.00 51.12
ATOM  1812  CD  GLU  391      71.218  48.325  40.540  1.00 57.29
ATOM  1813  OE1 GLU  391      71.970  49.287  40.802  1.00 58.15
ATOM  1814  OE2 GLU  391      70.764  47.559  41.416  1.00 62.51
ATOM  1815  C   GLU  391      68.386  51.015  38.501  1.00 45.94
ATOM  1816  O   GLU  391      68.567  52.114  39.033  1.00 51.14
ATOM  1817  N   CYA  392      67.727  50.872  37.354  1.00 45.84
ATOM  1818  CA  CYA  392      67.255  52.029  36.598  1.00 41.60
ATOM  1819  CB  CYA  392      67.681  51.889  35.140  1.00 42.06
ATOM  1820  SG  CYA  392      69.452  52.008  34.968  1.00 44.47
ATOM  1821  AS  CYA  392      69.867  50.812  33.150  1.00 54.22
ATOM  1822  C   CYA  392      65.779  52.395  36.683  1.00 42.27
ATOM  1823  O   CYA  392      64.937  51.564  37.029  1.00 43.91
ATOM  1824  N   PRO  393      65.451  53.674  36.414  1.00 42.79
ATOM  1825  CD  PRO  393      66.384  54.774  36.106  1.00 38.59
ATOM  1826  CA  PRO  393      64.067  54.159  36.459  1.00 44.20
ATOM  1827  CB  PRO  393      64.218  55.667  36.238  1.00 39.88
ATOM  1828  CG  PRO  393      65.487  55.789  35.459  1.00 35.88
ATOM  1829  C   PRO  393      63.178  53.513  35.398  1.00 45.29
ATOM  1830  O   PRO  393      63.600  53.308  34.257  1.00 43.97
ATOM  1831  N   THR  394      61.935  53.238  35.782  1.00 48.20
ATOM  1832  CA  THR  394      60.959  52.607  34.901  1.00 53.71
ATOM  1833  CB  THR  394      59.605  52.429  35.629  1.00 59.59
ATOM  1834  OG1 THR  394      58.690  51.717  34.787  1.00 66.50
ATOM  1835  CG2 THR  394      59.013  53.787  36.004  1.00 61.00
ATOM  1836  C   THR  394      60.752  53.358  33.581  1.00 51.35
ATOM  1837  O   THR  394      60.419  52.751  32.563  1.00 54.39
```

```
ATOM   1838  N   GLU  395      61.008  54.664  33.595  1.00 47.65
ATOM   1839  CA  GLU  395      60.845  55.509  32.414  1.00 44.43
ATOM   1840  CB  GLU  395      60.988  56.978  32.804  1.00 43.85
ATOM   1841  C   GLU  395      61.788  55.175  31.250  1.00 42.93
ATOM   1842  O   GLU  395      61.589  55.649  30.129  1.00 41.39
ATOM   1843  N   LEU  396      62.818  54.375  31.517  1.00 39.38
ATOM   1844  CA  LEU  396      63.782  53.989  30.486  1.00 35.70
ATOM   1845  CB  LEU  396      65.185  53.867  31.090  1.00 34.96
ATOM   1846  CG  LEU  396      65.854  55.141  31.609  1.00 36.47
ATOM   1847  CD1 LEU  396      67.234  54.807  32.150  1.00 34.21
ATOM   1848  CD2 LEU  396      65.959  56.164  30.491  1.00 32.74
ATOM   1849  C   LEU  396      63.407  52.671  29.803  1.00 34.60
ATOM   1850  O   LEU  396      64.086  52.223  28.873  1.00 30.36
ATOM   1851  N   PHE  397      62.325  52.059  30.269  1.00 33.02
ATOM   1852  CA  PHE  397      61.868  50.792  29.725  1.00 33.39
ATOM   1853  CB  PHE  397      61.615  49.782  30.852  1.00 34.30
ATOM   1854  CG  PHE  397      62.834  49.439  31.665  1.00 32.62
ATOM   1855  CD1 PHE  397      63.296  50.301  32.654  1.00 32.35
ATOM   1856  CD2 PHE  397      63.504  48.241  31.461  1.00 31.28
ATOM   1857  CE1 PHE  397      64.407  49.976  33.426  1.00 27.01
ATOM   1858  CE2 PHE  397      64.616  47.905  32.229  1.00 33.34
ATOM   1859  CZ  PHE  397      65.067  48.775  33.213  1.00 31.29
ATOM   1860  C   PHE  397      60.580  50.961  28.934  1.00 33.17
ATOM   1861  O   PHE  397      59.540  51.318  29.498  1.00 31.99
ATOM   1862  N   PRO  398      60.636  50.752  27.606  1.00 32.45
ATOM   1863  CD  PRO  398      61.821  50.493  26.768  1.00 28.15
ATOM   1864  CA  PRO  398      59.429  50.885  26.786  1.00 30.02
ATOM   1865  CB  PRO  398      59.921  50.483  25.394  1.00 28.15
ATOM   1866  CG  PRO  398      61.352  50.923  25.397  1.00 24.89
ATOM   1867  C   PRO  398      58.384  49.900  27.326  1.00 28.39
ATOM   1868  O   PRO  398      58.735  48.810  27.789  1.00 28.00
ATOM   1869  N   PRO  399      57.092  50.262  27.267  1.00 32.45
ATOM   1870  CD  PRO  399      56.577  51.511  26.672  1.00 34.93
ATOM   1871  CA  PRO  399      55.989  49.421  27.753  1.00 32.54
ATOM   1872  CB  PRO  399      54.755  50.122  27.188  1.00 34.47
ATOM   1873  CG  PRO  399      55.159  51.564  27.196  1.00 31.37
ATOM   1874  C   PRO  399      56.044  47.946  27.338  1.00 32.18
ATOM   1875  O   PRO  399      55.950  47.054  28.188  1.00 32.58
ATOM   1876  N   LEU  400      56.195  47.689  26.041  1.00 30.15
ATOM   1877  CA  LEU  400      56.259  46.314  25.541  1.00 32.32
ATOM   1878  CB  LEU  400      56.211  46.297  24.011  1.00 28.67
ATOM   1879  CG  LEU  400      56.028  44.927  23.351  1.00 28.77
ATOM   1880  CD1 LEU  400      54.802  44.234  23.919  1.00 22.73
ATOM   1881  CD2 LEU  400      55.897  45.096  21.846  1.00 27.89
ATOM   1882  C   LEU  400      57.496  45.561  26.051  1.00 32.27
ATOM   1883  O   LEU  400      57.437  44.358  26.307  1.00 32.87
ATOM   1884  N   PHE  401      58.602  46.279  26.215  1.00 32.27
```

ATOM 1885 CA PHE 401 59.847 45.695 26.710 1.00 32.39
ATOM 1886 CB PHE 401 60.946 46.769 26.711 1.00 31.38
ATOM 1887 CG PHE 401 62.290 46.286 27.194 1.00 35.12
ATOM 1888 CD1 PHE 401 62.835 45.089 26.729 1.00 34.68
ATOM 1889 CD2 PHE 401 63.030 47.051 28.097 1.00 34.57
ATOM 1890 CE1 PHE 401 64.100 44.662 27.155 1.00 30.27
ATOM 1891 CE2 PHE 401 64.291 46.635 28.526 1.00 33.57
ATOM 1892 CZ PHE 401 64.828 45.438 28.054 1.00 35.74
ATOM 1893 C PHE 401 59.599 45.169 28.129 1.00 32.21
ATOM 1894 O PHE 401 60.002 44.056 28.478 1.00 33.36
ATOM 1895 N LEU 402 58.902 45.967 28.929 1.00 31.85
ATOM 1896 CA LEU 402 58.582 45.602 30.302 1.00 35.06
ATOM 1897 CB LEU 402 57.948 46.789 31.029 1.00 34.76
ATOM 1898 CG LEU 402 58.878 47.852 31.591 1.00 33.48
ATOM 1899 CD1 LEU 402 58.060 49.010 32.152 1.00 32.58
ATOM 1900 CD2 LEU 402 59.753 47.217 32.662 1.00 26.27
ATOM 1901 C LEU 402 57.626 44.426 30.393 1.00 36.80
ATOM 1902 O LEU 402 57.793 43.545 31.239 1.00 35.43
ATOM 1903 N GLU 403 56.600 44.443 29.547 1.00 38.50
ATOM 1904 CA GLU 403 55.581 43.401 29.540 1.00 40.24
ATOM 1905 CB GLU 403 54.435 43.792 28.605 1.00 44.03
ATOM 1906 CG GLU 403 53.239 42.850 28.666 1.00 55.53
ATOM 1907 CD GLU 403 52.180 43.159 27.618 1.00 66.67
ATOM 1908 OE1 GLU 403 52.151 44.299 27.095 1.00 70.81
ATOM 1909 OE2 GLU 403 51.370 42.255 27.315 1.00 73.80
ATOM 1910 C GLU 403 56.096 42.018 29.162 1.00 38.00
ATOM 1911 O GLU 403 55.745 41.029 29.805 1.00 38.78
ATOM 1912 N VAL 404 56.934 41.955 28.132 1.00 37.39
ATOM 1913 CA VAL 404 57.475 40.686 27.652 1.00 37.05
ATOM 1914 CB VAL 404 58.180 40.855 26.286 1.00 35.57
ATOM 1915 CG1 VAL 404 58.677 39.513 25.776 1.00 36.85
ATOM 1916 CG2 VAL 404 57.222 41.451 25.287 1.00 42.03
ATOM 1917 C VAL 404 58.438 40.000 28.609 1.00 38.69
ATOM 1918 O VAL 404 58.436 38.774 28.727 1.00 40.71
ATOM 1919 N PHE 405 59.267 40.785 29.286 1.00 39.34
ATOM 1920 CA PHE 405 60.250 40.221 30.198 1.00 39.33
ATOM 1921 CB PHE 405 61.620 40.840 29.913 1.00 33.87
ATOM 1922 CG PHE 405 62.107 40.609 28.509 1.00 32.17
ATOM 1923 CD1 PHE 405 62.355 41.683 27.660 1.00 31.34
ATOM 1924 CD2 PHE 405 62.315 39.317 28.032 1.00 31.98
ATOM 1925 CE1 PHE 405 62.801 41.476 26.352 1.00 30.79
ATOM 1926 CE2 PHE 405 62.759 39.099 26.730 1.00 26.06
ATOM 1927 CZ PHE 405 63.004 40.182 25.889 1.00 27.98
ATOM 1928 C PHE 405 59.905 40.322 31.682 1.00 42.64
ATOM 1929 O PHE 405 60.785 40.188 32.534 1.00 45.10
ATOM 1930 N GLU 406 58.630 40.536 31.988 1.00 48.95
ATOM 1931 CA GLU 406 58.181 40.641 33.373 1.00 56.93

ATOM	1932	CB	GLU	406	56.820	41.324	33.432	1.00	56.94
ATOM	1933	C	GLU	406	58.116	39.263	34.040	1.00	61.92
ATOM	1934	O	GLU	406	57.988	38.256	33.308	1.00	67.61
ATOM	1	O1	HOH	501	67.588	36.828	11.225	1.00	27.32
ATOM	2	O1	HOH	502	68.647	41.203	12.940	1.00	39.54
ATOM	3	O1	HOH	503	64.072	40.115	12.407	1.00	32.47
ATOM	4	O1	HOH	504	62.312	39.659	16.075	1.00	17.39
ATOM	5	O1	HOH	505	63.449	46.468	15.530	1.00	30.46
ATOM	6	O1	HOH	506	67.191	15.561	-0.279	1.00	35.96
ATOM	7	O1	HOH	507	67.100	11.855	0.295	1.00	20.00
ATOM	8	O1	HOH	508	61.004	15.510	0.047	1.00	20.00
ATOM	9	O1	HOH	509	59.851	10.761	6.050	1.00	20.00
ATOM	10	O1	HOH	510	57.553	11.824	10.360	1.00	44.63
ATOM	11	O1	HOH	511	54.101	13.545	8.720	1.00	20.00
ATOM	12	O1	HOH	512	55.923	15.916	12.205	1.00	29.31
ATOM	13	O1	HOH	513	50.900	19.934	8.193	1.00	20.00
ATOM	14	O1	HOH	514	50.474	22.912	7.942	1.00	45.34
ATOM	15	O1	HOH	515	49.737	20.631	11.530	1.00	20.00
ATOM	16	O1	HOH	516	50.829	25.467	13.330	1.00	20.00
ATOM	17	O1	HOH	517	53.818	25.833	10.682	1.00	42.12
ATOM	18	O1	HOH	518	52.591	31.216	7.313	1.00	35.55
ATOM	19	O1	HOH	519	58.510	31.667	2.158	1.00	20.00
ATOM	20	O1	HOH	520	58.235	36.751	2.232	1.00	20.00
ATOM	21	O1	HOH	521	62.484	37.992	5.537	1.00	20.00
ATOM	22	O1	HOH	522	68.184	36.969	5.889	1.00	50.08
ATOM	23	O1	HOH	523	66.889	33.781	8.584	1.00	20.00
ATOM	24	O1	HOH	524	67.217	30.836	3.085	1.00	34.44
ATOM	25	O1	HOH	525	64.336	28.325	3.098	1.00	20.00
ATOM	26	O1	HOH	526	67.667	26.625	1.519	1.00	20.00
ATOM	27	O1	HOH	527	76.757	22.883	5.467	1.00	36.94
ATOM	28	O1	HOH	528	72.250	17.936	6.950	1.00	36.00
ATOM	29	O1	HOH	529	71.760	14.791	8.058	1.00	40.18
ATOM	30	O1	HOH	530	72.884	14.751	11.484	1.00	41.44
ATOM	31	O1	HOH	531	69.235	12.986	11.709	1.00	39.38
ATOM	32	O1	HOH	532	69.402	12.036	14.891	1.00	40.68
ATOM	33	O1	HOH	533	64.560	10.910	15.076	1.00	20.00
ATOM	34	O1	HOH	534	63.169	10.413	11.722	1.00	20.00
ATOM	35	O1	HOH	535	66.042	11.455	11.077	1.00	41.05
ATOM	36	O1	HOH	536	76.285	12.458	10.677	1.00	20.00
ATOM	37	O1	HOH	537	81.094	22.520	13.435	1.00	48.70
ATOM	38	O1	HOH	538	80.505	25.457	14.849	1.00	46.30
ATOM	39	O1	HOH	539	77.669	21.932	18.119	1.00	43.79
ATOM	40	O1	HOH	540	77.187	28.903	21.137	1.00	40.22
ATOM	41	O1	HOH	541	76.420	30.760	23.658	1.00	29.63
ATOM	42	O1	HOH	542	83.028	32.743	20.922	1.00	38.14
ATOM	43	O1	HOH	543	82.842	43.133	17.983	1.00	39.36
ATOM	44	O1	HOH	544	77.484	34.040	9.664	1.00	36.37

```
ATOM     45  O1  HOH   545      75.904  32.986  12.256  1.00 34.93
ATOM     46  O1  HOH   546      74.185  29.689   9.761  1.00 38.60
ATOM     47  O1  HOH   547      64.936  20.644  23.365  1.00 36.83
ATOM     48  O1  HOH   548      61.750  22.313  25.288  1.00 34.81
ATOM     49  O1  HOH   549      59.544  21.463  26.162  1.00 20.00
ATOM     50  O1  HOH   550      62.300  27.528  24.386  1.00 35.89
ATOM     51  O1  HOH   551      58.228  29.424  24.603  1.00 25.47
ATOM     52  O1  HOH   552      57.368  32.196  30.527  1.00 45.27
ATOM     53  O1  HOH   553      62.063  36.304  30.245  1.00 42.26
ATOM     54  O1  HOH   554      64.722  36.725  28.906  1.00 24.66
ATOM     55  O1  HOH   555      62.207  35.851  26.642  1.00 30.36
ATOM     56  O1  HOH   556      63.608  33.715  25.707  1.00 42.74
ATOM     57  O1  HOH   557      62.979  38.422  32.977  1.00 49.93
ATOM     58  O1  HOH   558      66.911  33.364  34.901  1.00 50.02
ATOM     59  O1  HOH   559      72.608  29.636  31.674  1.00 37.60
ATOM     60  O1  HOH   560      76.967  40.633  32.514  1.00 44.81
ATOM     61  O1  HOH   561      73.613  41.817  36.847  1.00 31.79
ATOM     62  O1  HOH   562      75.773  46.227  30.514  1.00 29.06
ATOM     63  O1  HOH   563      79.903  46.178  30.800  1.00 41.67
ATOM     64  O1  HOH   564      69.746  51.175  33.564  1.00 20.00
ATOM     65  O1  HOH   565      74.320  52.047  39.438  1.00 20.00
ATOM     66  O1  HOH   566      65.900  53.647  27.404  1.00 40.45
ATOM     67  O1  HOH   567      68.848  53.076  17.895  1.00 39.25
ATOM     68  O1  HOH   568      63.507  48.672  13.581  1.00 43.77
ATOM     69  O1  HOH   569      64.625  46.825  10.331  1.00 20.00
ATOM     70  O1  HOH   570      55.882  41.431  11.148  1.00 20.00
ATOM     71  O1  HOH   571      52.830  43.513  20.032  1.00 35.18
ATOM     72  O1  HOH   572      56.990  49.485  24.052  1.00 37.30
ATOM     73  O1  HOH   573      54.188  47.024  30.900  1.00 52.93
ATOM     74  O1  HOH   574      57.823  44.590  34.025  1.00 53.64
ATOM     75  O1  HOH   575      47.827  29.597  30.690  1.00 37.61
ATOM     76  O1  HOH   576      53.030  24.901  32.732  1.00 45.06
ATOM     77  O1  HOH   577      47.569  19.105  28.647  1.00 38.88
ATOM     78  O1  HOH   578      47.232  20.282  25.561  1.00 20.00
ATOM     79  O1  HOH   579      51.960  14.869  25.534  1.00 49.45
ATOM     80  O1  HOH   580      52.831  23.395   1.634  1.00 20.00
ATOM     81  O1  HOH   581      51.472  22.968  -0.900  1.00 25.10
ATOM     82  O1  HOH   582      77.238  52.503   8.906  1.00 47.05
END
ATOM   2004  C1  DMT     1      67.320  42.326  18.648  1.00 28.58
ATOM   2005  C2  DMT     1      68.927  43.263  23.318  1.00 29.26
ATOM   2006  C3  DMT     1      67.236  43.583  19.236  1.00 24.54
ATOM   2007  C4  DMT     1      69.268  44.313  24.111  1.00 28.48
ATOM   2008  C5  DMT     1      68.003  43.859  20.363  1.00 28.76
ATOM   2009  C6  DMT     1      68.654  44.389  25.458  1.00 28.16
ATOM   2010  C7  DMT     1      68.811  42.902  20.875  1.00 26.80
ATOM   2011  C8  DMT     1      67.803  43.410  25.793  1.00 29.83
```

```
ATOM   2012  C9  DMT     1      68.921  41.665  20.324  1.00 26.77
ATOM   2013  C10 DMT     1      67.464  42.358  24.989  1.00 28.60
ATOM   2014  C11 DMT     1      68.165  41.349  19.185  1.00 25.29
ATOM   2015  C12 DMT     1      68.059  42.281  23.675  1.00 26.74
ATOM   2016  C13 DMT     1      66.475  42.038  17.456  1.00 21.51
ATOM   2017  C14 DMT     1      68.916  45.478  26.380  1.00 21.05
ATOM   2018  C15 DMT     1      66.989  40.910  16.417  1.00 22.84
ATOM   2019  C16 DMT     1      68.090  46.870  26.009  1.00 19.41
ATOM   2020  C17 DMT     1      65.982  40.730  15.243  1.00 27.07
ATOM   2021  C18 DMT     1      70.279  46.131  26.085  1.00 16.03
ATOM   2022  C19 DMT     1      67.903  45.249  20.974  1.00 19.56
ATOM   2023  C20 DMT     1      69.853  40.599  20.901  1.00  4.52
ATOM   2024  N1  DMT     1      68.280  41.070  16.042  1.00 17.57
ATOM   2025  O1  DMT     1      67.209  43.465  27.087  1.00 25.94
ATOM   2026  O2  DMT     1      69.547  43.191  22.015  1.00 30.23
ATOM   2027  O3  DMT     1      66.449  40.778  14.118  1.00 29.45
ATOM   2028  O4  DMT     1      64.820  40.564  15.546  1.00 26.46
END
```

APPENDIX 4

TR_TRIAC.PDB

```
REMARK
REMARK TR_triac full length numbering
REMARK Rfactor 0.236 Rfree 0.241
REMARK Resolution 25. 2.5 all reflections
REMARK
REMARK Three cacodylate-modified cysteines:
REMARK Cys334, Cys380, Cys392
REMARK modeled as free arsenic atoms
REMARK
REMARK conserved polar HOH numbered as in TR_t3.pdb
REMARK rearrangements start 600
REMARK
REMARK side chain of certain residues modeled as ALA due to poor density;
REMARK however, residue name reflects true residue for clarity
REMARK
REMARK clone obtained from Murray et. al.
REMARK deposited sequence confirmed,
REMARK differing from that reported by Thompson et. al.
REMARK in the following codons:
REMARK 281 Thr - Ala
REMARK 285 Lys - Glu
REMARK identical to that reported by Mitsuhashi et. al.
REMARK gb:RNTRAVI X07409
JRNL        AUTH   M.B. MURRAY, N.D.ZILZ, N.L.MCCREARY,M.J.MACDONALD
JRNL        AUTH 2 H.C.TOWLE
JRNL         TITL   ISOLATION AND CHARACTERIZATION OF RAT CDNA CLONES
FOR TWO
JRNL        TITL 2 DISTINCT THYROID HORMONE RECPTORS
JRNL        REF    JBC                  V. 263 25  1988
JRNL        AUTH   C.C.THOMPSON, C.WEINBERGER, R.LEBO, R.M.EVANS
JRNL        TITL   IDENTIFICATION OF A NOVEL THYROID HORMONE RECEPTOR
EXPRESSED
JRNL        TITL 2 IN THE MAMMALIAN CENTRAL NERVOUS SYSTEM
JRNL        REF    SCIENCE              V. 237     1987
JRNL        AUTH   T.MITSUHASHI,G.TENNYSON,V.NIKODEM
JRNL         TITL   NUCLEOTIDE SEQUENCE OF NOVEL CDNAS GENERATED BY
ALTERNATIVE
JRNL         TITL 2 SPLICING OF A RAT THYROID HORMONE RECEPTOR GENE
TRANSCRIPT
JRNL        REF    NUC. ACIDS. RES.          V. 16  12  1988
REMARK
ATOM      1  CB  ARG   157      9.880 -24.199   7.196  1.00 57.79
ATOM      2  CG  ARG   157     11.380 -24.411   7.340  1.00 57.79
```

```
ATOM      3  CD  ARG   157      11.960 -23.602   8.486  1.00 57.79
ATOM      4  NE  ARG   157      11.492 -24.098   9.778  1.00 57.79
ATOM      5  CZ  ARG   157      12.284 -24.379  10.809  1.00 57.79
ATOM      6  NH1 ARG   157      13.598 -24.212  10.714  1.00 57.79
ATOM      7  NH2 ARG   157      11.762 -24.854  11.932  1.00 57.79
ATOM      8  C   ARG   157       7.774 -24.838   5.974  1.00 38.50
ATOM      9  O   ARG   157       7.553 -24.416   4.840  1.00 57.79
ATOM     10  N   ARG   157       9.929 -25.500   5.089  1.00 38.50
ATOM     11  CA  ARG   157       9.183 -25.276   6.360  1.00 38.50
ATOM     12  N   PRO   158       6.802 -24.951   6.895  1.00 23.08
ATOM     13  CD  PRO   158       6.945 -25.424   8.282  1.00 28.38
ATOM     14  CA  PRO   158       5.415 -24.562   6.617  1.00 23.08
ATOM     15  CB  PRO   158       4.704 -24.824   7.948  1.00 28.38
ATOM     16  CG  PRO   158       5.801 -24.735   8.966  1.00 28.38
ATOM     17  C   PRO   158       5.210 -23.124   6.132  1.00 23.08
ATOM     18  O   PRO   158       5.678 -22.167   6.753  1.00 28.38
ATOM     19  N   GLU   159       4.504 -23.000   5.012  1.00 19.26
ATOM     20  CA  GLU   159       4.191 -21.717   4.389  1.00 19.26
ATOM     21  CB  GLU   159       4.022 -21.912   2.878  1.00 24.58
ATOM     22  CG  GLU   159       5.317 -22.009   2.086  1.00 24.58
ATOM     23  CD  GLU   159       5.849 -20.651   1.659  1.00 24.58
ATOM     24  OE1 GLU   159       5.034 -19.722   1.476  1.00 24.58
ATOM     25  OE2 GLU   159       7.080 -20.513   1.490  1.00 24.58
ATOM     26  C   GLU   159       2.879 -21.193   4.968  1.00 19.26
ATOM     27  O   GLU   159       2.152 -21.931   5.636  1.00 24.58
ATOM     28  N   PRO   160       2.579 -19.899   4.765  1.00 17.44
ATOM     29  CD  PRO   160       3.442 -18.817   4.259  1.00 13.94
ATOM     30  CA  PRO   160       1.323 -19.360   5.299  1.00 17.44
ATOM     31  CB  PRO   160       1.414 -17.872   4.956  1.00 13.94
ATOM     32  CG  PRO   160       2.880 -17.604   4.952  1.00 13.94
ATOM     33  C   PRO   160       0.098 -20.006   4.639  1.00 17.44
ATOM     34  O   PRO   160       0.067 -20.207   3.423  1.00 13.94
ATOM     35  N   THR   161      -0.895 -20.352   5.450  1.00 17.00
ATOM     36  CA  THR   161      -2.119 -20.957   4.941  1.00 17.00
ATOM     37  CB  THR   161      -2.958 -21.587   6.086  1.00 20.43
ATOM     38  OG1 THR   161      -3.441 -20.557   6.959  1.00 20.43
ATOM     39  CG2 THR   161      -2.121 -22.576   6.888  1.00 20.43
ATOM     40  C   THR   161      -2.929 -19.843   4.284  1.00 17.00
ATOM     41  O   THR   161      -2.691 -18.660   4.547  1.00 20.43
ATOM     42  N   PRO   162      -3.918 -20.200   3.449  1.00 12.94
ATOM     43  CD  PRO   162      -4.311 -21.559   3.038  1.00 17.56
ATOM     44  CA  PRO   162      -4.743 -19.190   2.780  1.00 12.94
ATOM     45  CB  PRO   162      -5.846 -20.029   2.143  1.00 17.56
ATOM     46  CG  PRO   162      -5.147 -21.303   1.816  1.00 17.56
ATOM     47  C   PRO   162      -5.317 -18.171   3.763  1.00 12.94
ATOM     48  O   PRO   162      -5.305 -16.964   3.503  1.00 17.56
ATOM     49  N   GLU   163      -5.790 -18.668   4.903  1.00 19.45
```

```
ATOM     50  CA  GLU   163      -6.374 -17.828   5.943  1.00 19.45
ATOM     51  CB  GLU   163      -6.994 -18.690   7.047  1.00 49.96
ATOM     52  CG  GLU   163      -8.178 -19.558   6.606  1.00 49.96
ATOM     53  CD  GLU   163      -7.782 -20.720   5.697  1.00 49.96
ATOM     54  OE1 GLU   163      -6.735 -21.361   5.951  1.00 49.96
ATOM     55  OE2 GLU   163      -8.527 -20.999   4.731  1.00 49.96
ATOM     56  C   GLU   163      -5.330 -16.897   6.548  1.00 19.45
ATOM     57  O   GLU   163      -5.614 -15.731   6.832  1.00 49.96
ATOM     58  N   GLU   164      -4.120 -17.417   6.734  1.00 22.03
ATOM     59  CA  GLU   164      -3.033 -16.634   7.305  1.00 22.03
ATOM     60  CB  GLU   164      -1.875 -17.541   7.725  1.00 17.15
ATOM     61  CG  GLU   164      -2.198 -18.414   8.937  1.00 17.15
ATOM     62  CD  GLU   164      -1.114 -19.434   9.249  1.00 17.15
ATOM     63  OE1 GLU   164      -0.283 -19.710   8.361  1.00 17.15
ATOM     64  OE2 GLU   164      -1.099 -19.968  10.379  1.00 17.15
ATOM     65  C   GLU   164      -2.559 -15.542   6.354  1.00 22.03
ATOM     66  O   GLU   164      -2.160 -14.470   6.802  1.00 17.15
ATOM     67  N   TRP   165      -2.607 -15.805   5.048  1.00 10.72
ATOM     68  CA  TRP   165      -2.205 -14.803   4.063  1.00 10.72
ATOM     69  CB  TRP   165      -2.223 -15.377   2.644  1.00  2.00
ATOM     70  CG  TRP   165      -0.928 -16.003   2.227  1.00  2.00
ATOM     71  CD2 TRP   165       0.350 -15.358   2.131  1.00  2.00
ATOM     72  CE2 TRP   165       1.275 -16.326   1.685  1.00  2.00
ATOM     73  CE3 TRP   165       0.804 -14.054   2.379  1.00  2.00
ATOM     74  CD1 TRP   165      -0.731 -17.298   1.848  1.00  2.00
ATOM     75  NE1 TRP   165       0.587 -17.500   1.521  1.00  2.00
ATOM     76  CZ2 TRP   165       2.627 -16.036   1.479  1.00  2.00
ATOM     77  CZ3 TRP   165       2.152 -13.764   2.174  1.00  2.00
ATOM     78  CH2 TRP   165       3.046 -14.754   1.729  1.00  2.00
ATOM     79  C   TRP   165      -3.137 -13.601   4.149  1.00 10.72
ATOM     80  O   TRP   165      -2.717 -12.463   3.925  1.00  2.00
ATOM     81  N   ASP   166      -4.408 -13.861   4.441  1.00 14.80
ATOM     82  CA  ASP   166      -5.397 -12.796   4.580  1.00 14.80
ATOM     83  CB  ASP   166      -6.812 -13.370   4.698  1.00 28.74
ATOM     84  CG  ASP   166      -7.298 -13.999   3.403  1.00 28.74
ATOM     85  OD1 ASP   166      -6.909 -13.511   2.320  1.00 28.74
ATOM     86  OD2 ASP   166      -8.071 -14.978   3.466  1.00 28.74
ATOM     87  C   ASP   166      -5.063 -11.981   5.819  1.00 14.80
ATOM     88  O   ASP   166      -5.056 -10.749   5.775  1.00 28.74
ATOM     89  N   LEU   167      -4.745 -12.682   6.906  1.00 11.01
ATOM     90  CA  LEU   167      -4.383 -12.044   8.166  1.00 11.01
ATOM     91  CB  LEU   167      -4.036 -13.103   9.214  1.00 31.53
ATOM     92  CG  LEU   167      -4.672 -12.975  10.601  1.00 31.53
ATOM     93  CD1 LEU   167      -3.806 -13.709  11.619  1.00 31.53
ATOM     94  CD2 LEU   167      -4.820 -11.507  10.989  1.00 31.53
ATOM     95  C   LEU   167      -3.161 -11.159   7.933  1.00 11.01
ATOM     96  O   LEU   167      -3.120 -10.006   8.367  1.00 31.53
```

```
ATOM   97  N   ILE  168     -2.180 -11.714   7.228  1.00 13.18
ATOM   98  CA  ILE  168     -0.937 -11.027   6.900  1.00 13.18
ATOM   99  CB  ILE  168      0.015 -11.968   6.113  1.00 18.30
ATOM  100  CG2 ILE  168      1.118 -11.182   5.414  1.00 18.30
ATOM  101  CG1 ILE  168      0.604 -13.013   7.063  1.00 18.30
ATOM  102  CD1 ILE  168      1.379 -14.111   6.373  1.00 18.30
ATOM  103  C   ILE  168     -1.185  -9.747   6.107  1.00 13.18
ATOM  104  O   ILE  168     -0.637  -8.697   6.437  1.00 18.30
ATOM  105  N   HIS  169     -2.032  -9.831   5.084  1.00 12.99
ATOM  106  CA  HIS  169     -2.342  -8.674   4.245  1.00 12.99
ATOM  107  CB  HIS  169     -3.218  -9.087   3.062  1.00 13.09
ATOM  108  CG  HIS  169     -2.553 -10.045   2.126  1.00 13.09
ATOM  109  CD2 HIS  169     -1.247 -10.223   1.811  1.00 13.09
ATOM  110  ND1 HIS  169     -3.249 -11.000   1.416  1.00 13.09
ATOM  111  CE1 HIS  169     -2.403 -11.728   0.710  1.00 13.09
ATOM  112  NE2 HIS  169     -1.181 -11.277   0.936  1.00 13.09
ATOM  113  C   HIS  169     -3.017  -7.550   5.017  1.00 12.99
ATOM  114  O   HIS  169     -2.680  -6.377   4.839  1.00 13.09
ATOM  115  N   VAL  170     -3.978  -7.909   5.862  1.00 13.36
ATOM  116  CA  VAL  170     -4.696  -6.926   6.664  1.00 13.36
ATOM  117  CB  VAL  170     -5.863  -7.572   7.443  1.00 20.12
ATOM  118  CG1 VAL  170     -6.541  -6.540   8.340  1.00 20.12
ATOM  119  CG2 VAL  170     -6.869  -8.165   6.471  1.00 20.12
ATOM  120  C   VAL  170     -3.741  -6.246   7.639  1.00 13.36
ATOM  121  O   VAL  170     -3.728  -5.019   7.744  1.00 20.12
ATOM  122  N   ALA  171     -2.920  -7.043   8.320  1.00 11.04
ATOM  123  CA  ALA  171     -1.953  -6.515   9.277  1.00 11.04
ATOM  124  CB  ALA  171     -1.249  -7.653  10.005  1.00 13.43
ATOM  125  C   ALA  171     -0.931  -5.613   8.588  1.00 11.04
ATOM  126  O   ALA  171     -0.658  -4.507   9.058  1.00 13.43
ATOM  127  N   THR  172     -0.382  -6.076   7.469  1.00 12.51
ATOM  128  CA  THR  172      0.606  -5.301   6.723  1.00 12.51
ATOM  129  CB  THR  172      1.062  -6.032   5.445  1.00 14.17
ATOM  130  OG1 THR  172      1.548  -7.338   5.782  1.00 14.17
ATOM  131  CG2 THR  172      2.175  -5.255   4.756  1.00 14.17
ATOM  132  C   THR  172      0.045  -3.936   6.337  1.00 12.51
ATOM  133  O   THR  172      0.701  -2.910   6.537  1.00 14.17
ATOM  134  N   GLU  173     -1.178  -3.921   5.815  1.00 17.79
ATOM  135  CA  GLU  173     -1.818  -2.675   5.421  1.00 17.79
ATOM  136  CB  GLU  173     -3.130  -2.946   4.682  1.00 49.44
ATOM  137  CG  GLU  173     -3.823  -1.679   4.171  1.00 49.44
ATOM  138  CD  GLU  173     -2.930  -0.835   3.266  1.00 49.44
ATOM  139  OE1 GLU  173     -2.075  -1.408   2.552  1.00 49.44
ATOM  140  OE2 GLU  173     -3.085   0.404   3.269  1.00 49.44
ATOM  141  C   GLU  173     -2.072  -1.780   6.628  1.00 17.79
ATOM  142  O   GLU  173     -1.854  -0.568   6.557  1.00 49.44
ATOM  143  N   ALA  174     -2.525  -2.375   7.731  1.00 13.12
```

```
ATOM   144  CA  ALA  174      -2.798  -1.631   8.957  1.00 13.12
ATOM   145  CB  ALA  174      -3.226  -2.576  10.068  1.00 17.51
ATOM   146  C   ALA  174      -1.556  -0.856   9.375  1.00 13.12
ATOM   147  O   ALA  174      -1.634   0.319   9.735  1.00 17.51
ATOM   148  N   HIS  175      -0.409  -1.521   9.317  1.00 12.20
ATOM   149  CA  HIS  175       0.851  -0.895   9.679  1.00 12.20
ATOM   150  CB  HIS  175       1.944  -1.949   9.886  1.00 17.52
ATOM   151  CG  HIS  175       3.302  -1.365  10.136  1.00 17.52
ATOM   152  CD2 HIS  175       3.733  -0.468  11.055  1.00 17.52
ATOM   153  ND1 HIS  175       4.400  -1.679   9.364  1.00 17.52
ATOM   154  CE1 HIS  175       5.447  -0.999   9.793  1.00 17.52
ATOM   155  NE2 HIS  175       5.070  -0.258  10.818  1.00 17.52
ATOM   156  C   HIS  175       1.311   0.133   8.654  1.00 12.20
ATOM   157  O   HIS  175       1.700   1.240   9.024  1.00 17.52
ATOM   158  N   ARG  176       1.291  -0.233   7.375  1.00 12.54
ATOM   159  CA  ARG  176       1.735   0.677   6.328  1.00 12.54
ATOM   160  CB  ARG  176       1.662   0.017   4.950  1.00 50.41
ATOM   161  CG  ARG  176       2.683  -1.088   4.730  1.00 50.41
ATOM   162  CD  ARG  176       2.666  -1.565   3.299  1.00 50.41
ATOM   163  NE  ARG  176       3.682  -2.571   2.989  1.00 50.41
ATOM   164  CZ  ARG  176       3.577  -3.472   2.012  1.00 50.41
ATOM   165  NH1 ARG  176       2.496  -3.513   1.236  1.00 50.41
ATOM   166  NH2 ARG  176       4.536  -4.376   1.841  1.00 50.41
ATOM   167  C   ARG  176       0.972   1.988   6.306  1.00 12.54
ATOM   168  O   ARG  176       1.561   3.040   6.087  1.00 50.41
ATOM   169  N   SER  177      -0.326   1.935   6.581  1.00 24.74
ATOM   170  CA  SER  177      -1.147   3.145   6.584  1.00 24.74
ATOM   171  CB  SER  177      -2.622   2.792   6.414  1.00 21.56
ATOM   172  OG  SER  177      -3.069   1.913   7.436  1.00 21.56
ATOM   173  C   SER  177      -0.960   4.013   7.832  1.00 24.74
ATOM   174  O   SER  177      -1.401   5.159   7.863  1.00 21.56
ATOM   175  N   THR  178      -0.347   3.453   8.870  1.00 17.96
ATOM   176  CA  THR  178      -0.104   4.181  10.115  1.00 17.96
ATOM   177  CB  THR  178      -0.736   3.440  11.323  1.00 19.76
ATOM   178  OG1 THR  178      -0.265   2.091  11.361  1.00 19.76
ATOM   179  CG2 THR  178      -2.253   3.443  11.211  1.00 19.76
ATOM   180  C   THR  178       1.376   4.395  10.382  1.00 17.96
ATOM   181  O   THR  178       1.760   4.880  11.445  1.00 19.76
ATOM   182  N   ASN  179       2.207   4.024   9.417  1.00 25.88
ATOM   183  CA  ASN  179       3.654   4.180   9.546  1.00 25.88
ATOM   184  CB  ASN  179       4.362   2.974   8.943  1.00 44.29
ATOM   185  CG  ASN  179       5.817   2.871   9.368  1.00 44.29
ATOM   186  OD1 ASN  179       6.129   2.768  10.564  1.00 44.29
ATOM   187  ND2 ASN  179       6.719   2.830   8.391  1.00 44.29
ATOM   188  C   ASN  179       4.078   5.458   8.823  1.00 25.88
ATOM   189  O   ASN  179       4.150   5.495   7.590  1.00 44.29
ATOM   190  N   ALA  180       4.332   6.502   9.604  1.00 45.20
```

ATOM 191 CA ALA 180 4.740 7.818 9.126 1.00 45.20
ATOM 192 CB ALA 180 5.026 8.743 10.313 1.00 36.14
ATOM 193 C ALA 180 5.931 7.808 8.170 1.00 45.20
ATOM 194 O ALA 180 6.918 7.097 8.372 1.00 36.14
ATOM 195 N ALA 181 5.784 8.552 7.080 1.00 44.05
ATOM 196 CA ALA 181 6.834 8.661 6.072 1.00 44.05
ATOM 197 CB ALA 181 8.170 9.116 6.722 1.00 50.21
ATOM 198 C ALA 181 7.069 7.427 5.196 1.00 44.05
ATOM 199 O ALA 181 7.663 7.550 4.118 1.00 50.21
ATOM 200 N GLY 182 6.567 6.268 5.622 1.00 39.06
ATOM 201 CA GLY 182 6.756 5.040 4.867 1.00 39.06
ATOM 202 C GLY 182 8.202 4.769 4.482 1.00 39.06
ATOM 203 O GLY 182 9.096 4.785 5.334 1.00 48.58
ATOM 204 N SER 183 8.438 4.564 3.189 1.00 64.55
ATOM 205 CA SER 183 9.781 4.270 2.693 1.00 64.55
ATOM 206 CB SER 183 9.690 3.402 1.430 1.00 67.68
ATOM 207 OG SER 183 8.822 3.978 0.467 1.00 67.68
ATOM 208 C SER 183 10.643 5.510 2.437 1.00 64.55
ATOM 209 O SER 183 11.839 5.407 2.158 1.00 67.68
ATOM 210 N HIS 184 10.035 6.683 2.579 1.00 52.73
ATOM 211 CA HIS 184 10.725 7.953 2.352 1.00 52.73
ATOM 212 CB HIS 184 9.772 8.955 1.698 1.00 44.77
ATOM 213 C HIS 184 11.364 8.582 3.595 1.00 52.73
ATOM 214 O HIS 184 11.837 9.722 3.540 1.00 44.77
ATOM 215 N TRP 185 11.420 7.842 4.699 1.00 54.14
ATOM 216 CA TRP 185 11.977 8.389 5.940 1.00 54.14
ATOM 217 CB TRP 185 11.813 7.395 7.104 1.00 40.24
ATOM 218 CG TRP 185 12.605 6.123 6.991 1.00 40.24
ATOM 219 CD2 TRP 185 13.894 5.873 7.551 1.00 40.24
ATOM 220 CE2 TRP 185 14.245 4.543 7.221 1.00 40.24
ATOM 221 CE3 TRP 185 14.791 6.641 8.300 1.00 40.24
ATOM 222 CD1 TRP 185 12.227 4.973 6.359 1.00 40.24
ATOM 223 NE1 TRP 185 13.210 4.015 6.496 1.00 40.24
ATOM 224 CZ2 TRP 185 15.461 3.968 7.619 1.00 40.24
ATOM 225 CZ3 TRP 185 15.996 6.073 8.696 1.00 40.24
ATOM 226 CH2 TRP 185 16.319 4.747 8.353 1.00 40.24
ATOM 227 C TRP 185 13.432 8.870 5.819 1.00 54.14
ATOM 228 O TRP 185 13.759 10.008 6.168 1.00 40.24
ATOM 229 N LYS 186 14.277 8.032 5.232 1.00 43.72
ATOM 230 CA LYS 186 15.694 8.329 5.035 1.00 43.72
ATOM 231 CB LYS 186 16.353 7.168 4.282 1.00 64.14
ATOM 232 CG LYS 186 17.830 7.355 3.945 1.00 64.14
ATOM 233 CD LYS 186 18.758 7.175 5.139 1.00 64.14
ATOM 234 CE LYS 186 20.195 7.060 4.652 1.00 64.14
ATOM 235 NZ LYS 186 20.348 5.838 3.805 1.00 64.14
ATOM 236 C LYS 186 15.900 9.634 4.263 1.00 43.72
ATOM 237 O LYS 186 16.948 10.256 4.366 1.00 64.14

ATOM 238 N GLN 187 14.892 10.032 3.491 1.00 58.06
ATOM 239 CA GLN 187 14.958 11.244 2.682 1.00 58.06
ATOM 240 CB GLN 187 14.288 10.997 1.321 1.00 74.68
ATOM 241 CG GLN 187 14.639 9.662 0.667 1.00 74.68
ATOM 242 CD GLN 187 16.133 9.397 0.607 1.00 74.68
ATOM 243 OE1 GLN 187 16.926 10.312 0.381 1.00 74.68
ATOM 244 NE2 GLN 187 16.528 8.156 0.855 1.00 74.68
ATOM 245 C GLN 187 14.322 12.466 3.342 1.00 58.06
ATOM 246 O GLN 187 14.897 13.551 3.358 1.00 74.68
ATOM 247 N ARG 188 13.117 12.280 3.866 1.00 54.11
ATOM 248 CA ARG 188 12.363 13.360 4.505 1.00 54.11
ATOM 249 CB ARG 188 10.889 13.115 4.334 1.00 53.33
ATOM 250 C ARG 188 12.654 13.626 5.977 1.00 54.11
ATOM 251 O ARG 188 11.879 14.298 6.659 1.00 53.33
ATOM 252 N ARG 189 13.754 13.090 6.473 1.00 39.52
ATOM 253 CA ARG 189 14.089 13.271 7.875 1.00 39.52
ATOM 254 CB ARG 189 14.594 11.959 8.482 1.00 60.85
ATOM 255 CG ARG 189 15.969 11.555 7.991 1.00 60.85
ATOM 256 CD ARG 189 16.442 10.298 8.693 1.00 60.85
ATOM 257 NE ARG 189 17.833 9.963 8.385 1.00 60.85
ATOM 258 CZ ARG 189 18.627 9.261 9.190 1.00 60.85
ATOM 259 NH1 ARG 189 18.178 8.805 10.356 1.00 60.85
ATOM 260 NH2 ARG 189 19.882 9.021 8.841 1.00 60.85
ATOM 261 C ARG 189 15.109 14.378 8.109 1.00 39.52
ATOM 262 O ARG 189 16.037 14.565 7.320 1.00 60.85
ATOM 263 N LYS 190 14.934 15.100 9.212 1.00 44.13
ATOM 264 CA LYS 190 15.834 16.183 9.586 1.00 44.13
ATOM 265 CB LYS 190 15.068 17.500 9.680 1.00 45.33
ATOM 266 C LYS 190 16.472 15.846 10.928 1.00 44.13
ATOM 267 O LYS 190 15.827 15.272 11.805 1.00 45.33
ATOM 268 N PHE 191 17.748 16.184 11.067 1.00 35.64
ATOM 269 CA PHE 191 18.489 15.928 12.291 1.00 35.64
ATOM 270 CB PHE 191 19.993 16.008 12.025 1.00 53.94
ATOM 271 CG PHE 191 20.550 14.827 11.286 1.00 53.94
ATOM 272 CD1 PHE 191 20.209 14.596 9.958 1.00 53.94
ATOM 273 CD2 PHE 191 21.430 13.949 11.915 1.00 53.94
ATOM 274 CE1 PHE 191 20.735 13.510 9.265 1.00 53.94
ATOM 275 CE2 PHE 191 21.964 12.859 11.230 1.00 53.94
ATOM 276 CZ PHE 191 21.615 12.639 9.900 1.00 53.94
ATOM 277 C PHE 191 18.135 16.928 13.384 1.00 35.64
ATOM 278 O PHE 191 17.997 18.127 13.120 1.00 53.94
ATOM 279 N LEU 192 17.978 16.439 14.610 1.00 44.53
ATOM 280 CA LEU 192 17.683 17.315 15.736 1.00 44.53
ATOM 281 CB LEU 192 17.326 16.493 16.980 1.00 22.94
ATOM 282 CG LEU 192 16.931 17.259 18.246 1.00 22.94
ATOM 283 CD1 LEU 192 15.568 17.906 18.064 1.00 22.94
ATOM 284 CD2 LEU 192 16.909 16.308 19.427 1.00 22.94

ATOM 285 C LEU 192 18.974 18.101 15.980 1.00 44.53
ATOM 286 O LEU 192 20.049 17.507 16.129 1.00 22.94
ATOM 287 N PRO 193 18.895 19.444 15.977 1.00 34.26
ATOM 288 CD PRO 193 17.670 20.241 15.781 1.00 46.23
ATOM 289 CA PRO 193 20.058 20.311 16.198 1.00 34.26
ATOM 290 CB PRO 193 19.417 21.670 16.465 1.00 46.23
ATOM 291 CG PRO 193 18.213 21.641 15.579 1.00 46.23
ATOM 292 C PRO 193 20.917 19.844 17.372 1.00 34.26
ATOM 293 O PRO 193 20.413 19.614 18.471 1.00 46.23
ATOM 294 N ASP 194 22.217 19.716 17.125 1.00 42.67
ATOM 295 CA ASP 194 23.174 19.254 18.128 1.00 42.67
ATOM 296 CB ASP 194 24.583 19.226 17.536 1.00 68.50
ATOM 297 CG ASP 194 24.731 18.185 16.450 1.00 68.50
ATOM 298 OD1 ASP 194 25.066 17.027 16.782 1.00 68.50
ATOM 299 OD2 ASP 194 24.498 18.518 15.269 1.00 68.50
ATOM 300 C ASP 194 23.187 20.003 19.457 1.00 42.67
ATOM 301 O ASP 194 23.545 19.432 20.486 1.00 68.50
ATOM 302 N ASP 195 22.817 21.280 19.438 1.00 47.52
ATOM 303 CA ASP 195 22.793 22.070 20.666 1.00 47.52
ATOM 304 CB ASP 195 22.586 23.559 20.351 1.00 85.02
ATOM 305 CG ASP 195 21.327 23.824 19.537 1.00 85.02
ATOM 306 OD1 ASP 195 20.291 24.188 20.138 1.00 85.02
ATOM 307 OD2 ASP 195 21.377 23.683 18.294 1.00 85.02
ATOM 308 C ASP 195 21.715 21.561 21.627 1.00 47.52
ATOM 309 O ASP 195 21.762 21.826 22.831 1.00 85.02
ATOM 310 N ILE 196 20.760 20.810 21.089 1.00 44.54
ATOM 311 CA ILE 196 19.663 20.259 21.875 1.00 44.54
ATOM 312 CB ILE 196 18.379 20.137 21.023 1.00 39.66
ATOM 313 CG2 ILE 196 17.223 19.627 21.874 1.00 39.66
ATOM 314 CG1 ILE 196 18.031 21.496 20.407 1.00 39.66
ATOM 315 CD1 ILE 196 16.816 21.475 19.503 1.00 39.66
ATOM 316 C ILE 196 20.030 18.882 22.420 1.00 44.54
ATOM 317 O ILE 196 20.582 18.046 21.705 1.00 39.66
ATOM 318 N GLY 197 19.714 18.652 23.690 1.00 42.85
ATOM 319 CA GLY 197 20.006 17.372 24.307 1.00 42.85
ATOM 320 C GLY 197 21.371 17.285 24.956 1.00 42.85
ATOM 321 O GLY 197 21.815 16.198 25.318 1.00 40.22
ATOM 322 N GLN 198 22.029 18.425 25.137 1.00 53.07
ATOM 323 CA GLN 198 23.351 18.444 25.754 1.00 53.07
ATOM 324 CB GLN 198 24.357 19.103 24.810 1.00 44.23
ATOM 325 C GLN 198 23.344 19.153 27.110 1.00 53.07
ATOM 326 O GLN 198 24.396 19.545 27.616 1.00 44.23
ATOM 327 N SER 199 22.170 19.244 27.729 1.00 35.30
ATOM 328 CA SER 199 22.037 19.918 29.019 1.00 35.30
ATOM 329 CB SER 199 21.472 21.328 28.806 1.00 58.72
ATOM 330 OG SER 199 22.093 21.971 27.704 1.00 58.72
ATOM 331 C SER 199 21.168 19.169 30.036 1.00 35.30

ATOM 332 O SER 199 20.135 19.681 30.482 1.00 58.72
ATOM 333 N PRO 200 21.544 17.928 30.387 1.00 34.70
ATOM 334 CD PRO 200 22.656 17.108 29.872 1.00 38.71
ATOM 335 CA PRO 200 20.740 17.184 31.362 1.00 34.70
ATOM 336 CB PRO 200 21.311 15.769 31.266 1.00 38.71
ATOM 337 CG PRO 200 22.737 15.992 30.878 1.00 38.71
ATOM 338 C PRO 200 20.923 17.784 32.759 1.00 34.70
ATOM 339 O PRO 200 22.006 17.692 33.341 1.00 38.71
ATOM 340 N ILE 201 19.876 18.413 33.286 1.00 42.94
ATOM 341 CA ILE 201 19.961 19.041 34.604 1.00 42.94
ATOM 342 CB ILE 201 20.059 20.582 34.491 1.00 51.32
ATOM 343 CG2 ILE 201 21.468 20.991 34.078 1.00 51.32
ATOM 344 CG1 ILE 201 19.009 21.111 33.510 1.00 51.32
ATOM 345 CD1 ILE 201 19.169 22.582 33.164 1.00 51.32
ATOM 346 C ILE 201 18.871 18.676 35.610 1.00 42.94
ATOM 347 O ILE 201 19.049 18.875 36.814 1.00 51.32
ATOM 348 N VAL 202 17.737 18.172 35.133 1.00 50.33
ATOM 349 CA VAL 202 16.661 17.787 36.043 1.00 50.33
ATOM 350 CB VAL 202 15.296 17.722 35.326 1.00 36.59
ATOM 351 CG1 VAL 202 14.202 17.311 36.304 1.00 36.59
ATOM 352 CG2 VAL 202 14.968 19.074 34.714 1.00 36.59
ATOM 353 C VAL 202 17.007 16.435 36.665 1.00 50.33
ATOM 354 O VAL 202 17.335 15.481 35.955 1.00 36.59
ATOM 355 N SER 203 16.960 16.375 37.991 1.00 49.46
ATOM 356 CA SER 203 17.289 15.166 38.736 1.00 49.46
ATOM 357 CB SER 203 17.298 15.467 40.241 1.00 64.20
ATOM 358 OG SER 203 17.673 14.330 41.003 1.00 64.20
ATOM 359 C SER 203 16.356 13.992 38.463 1.00 49.46
ATOM 360 O SER 203 15.147 14.166 38.310 1.00 64.20
ATOM 361 N MET 204 16.944 12.800 38.419 1.00 41.99
ATOM 362 CA MET 204 16.223 11.551 38.205 1.00 41.99
ATOM 363 CB MET 204 16.320 11.096 36.746 1.00 48.64
ATOM 364 CG MET 204 15.470 11.895 35.771 1.00 48.64
ATOM 365 SD MET 204 13.702 11.783 36.114 1.00 48.64
ATOM 366 CE MET 204 13.284 10.257 35.264 1.00 48.64
ATOM 367 C MET 204 16.900 10.528 39.109 1.00 41.99
ATOM 368 O MET 204 18.127 10.417 39.121 1.00 48.64
ATOM 369 N PRO 205 16.108 9.754 39.869 1.00 38.42
ATOM 370 CD PRO 205 14.633 9.815 39.866 1.00 52.20
ATOM 371 CA PRO 205 16.586 8.724 40.797 1.00 38.42
ATOM 372 CB PRO 205 15.334 7.888 41.041 1.00 52.20
ATOM 373 CG PRO 205 14.254 8.919 41.028 1.00 52.20
ATOM 374 C PRO 205 17.769 7.858 40.340 1.00 38.42
ATOM 375 O PRO 205 18.724 7.675 41.092 1.00 52.20
ATOM 376 N ASP 206 17.720 7.349 39.111 1.00 49.06
ATOM 377 CA ASP 206 18.791 6.490 38.601 1.00 49.06
ATOM 378 CB ASP 206 18.282 5.627 37.437 1.00 74.42

```
ATOM   379  CG  ASP   206      17.690   6.450  36.305  1.00 74.42
ATOM   380  OD1 ASP   206      18.397   7.335  35.770  1.00 74.42
ATOM   381  OD2 ASP   206      16.516   6.199  35.948  1.00 74.42
ATOM   382  C   ASP   206      20.106   7.177  38.214  1.00 49.06
ATOM   383  O   ASP   206      21.069   6.506  37.838  1.00 74.42
ATOM   384  N   GLY   207      20.139   8.505  38.272  1.00 42.48
ATOM   385  CA  GLY   207      21.355   9.225  37.928  1.00 42.48
ATOM   386  C   GLY   207      21.330   9.965  36.601  1.00 42.48
ATOM   387  O   GLY   207      21.890  11.058  36.494  1.00 42.50
ATOM   388  N   ASP   208      20.725   9.365  35.581  1.00 46.70
ATOM   389  CA  ASP   208      20.636   9.999  34.266  1.00 46.70
ATOM   390  CB  ASP   208      20.162   8.994  33.212  1.00 61.56
ATOM   391  CG  ASP   208      21.143   7.856  33.006  1.00 61.56
ATOM   392  OD1 ASP   208      20.723   6.684  33.122  1.00 61.56
ATOM   393  OD2 ASP   208      22.330   8.134  32.724  1.00 61.56
ATOM   394  C   ASP   208      19.666  11.176  34.339  1.00 46.70
ATOM   395  O   ASP   208      18.462  10.983  34.506  1.00 61.56
ATOM   396  N   LYS   209      20.200  12.389  34.238  1.00 41.30
ATOM   397  CA  LYS   209      19.389  13.602  34.308  1.00 41.30
ATOM   398  CB  LYS   209      20.254  14.782  34.732  1.00 41.38
ATOM   399  C   LYS   209      18.657  13.916  33.004  1.00 41.30
ATOM   400  O   LYS   209      19.052  13.458  31.930  1.00 41.38
ATOM   401  N   VAL   210      17.603  14.723  33.109  1.00 43.36
ATOM   402  CA  VAL   210      16.792  15.107  31.954  1.00 43.36
ATOM   403  CB  VAL   210      15.275  15.014  32.282  1.00 30.23
ATOM   404  CG1 VAL   210      14.440  15.358  31.055  1.00 30.23
ATOM   405  CG2 VAL   210      14.923  13.624  32.782  1.00 30.23
ATOM   406  C   VAL   210      17.088  16.522  31.442  1.00 43.36
ATOM   407  O   VAL   210      17.395  17.430  32.221  1.00 30.23
ATOM   408  N   ASP   211      17.004  16.685  30.125  1.00 27.49
ATOM   409  CA  ASP   211      17.217  17.966  29.458  1.00 27.49
ATOM   410  CB  ASP   211      18.073  17.765  28.198  1.00 30.75
ATOM   411  CG  ASP   211      18.360  19.068  27.447  1.00 30.75
ATOM   412  OD1 ASP   211      19.473  19.196  26.900  1.00 30.75
ATOM   413  OD2 ASP   211      17.484  19.955  27.370  1.00 30.75
ATOM   414  C   ASP   211      15.819  18.445  29.073  1.00 27.49
ATOM   415  O   ASP   211      15.197  17.892  28.166  1.00 30.75
ATOM   416  N   LEU   212      15.343  19.488  29.745  1.00 31.99
ATOM   417  CA  LEU   212      14.013  20.042  29.492  1.00 31.99
ATOM   418  CB  LEU   212      13.778  21.274  30.369  1.00 35.19
ATOM   419  CG  LEU   212      13.606  20.997  31.864  1.00 35.19
ATOM   420  CD1 LEU   212      13.621  22.298  32.652  1.00 35.19
ATOM   421  CD2 LEU   212      12.309  20.237  32.098  1.00 35.19
ATOM   422  C   LEU   212      13.713  20.377  28.032  1.00 31.99
ATOM   423  O   LEU   212      12.625  20.083  27.539  1.00 35.19
ATOM   424  N   GLU   213      14.672  20.981  27.338  1.00 28.70
ATOM   425  CA  GLU   213      14.468  21.345  25.940  1.00 28.70
```

ATOM 426 CB GLU 213 15.623 22.209 25.428 1.00 62.21
ATOM 427 CG GLU 213 15.434 22.707 23.997 1.00 62.21
ATOM 428 CD GLU 213 16.651 23.440 23.446 1.00 62.21
ATOM 429 OE1 GLU 213 17.778 23.214 23.945 1.00 62.21
ATOM 430 OE2 GLU 213 16.478 24.237 22.498 1.00 62.21
ATOM 431 C GLU 213 14.317 20.104 25.067 1.00 28.70
ATOM 432 O GLU 213 13.403 20.024 24.247 1.00 62.21
ATOM 433 N ALA 214 15.201 19.130 25.262 1.00 28.17
ATOM 434 CA ALA 214 15.162 17.890 24.494 1.00 28.17
ATOM 435 CB ALA 214 16.330 16.998 24.872 1.00 42.74
ATOM 436 C ALA 214 13.844 17.176 24.759 1.00 28.17
ATOM 437 O ALA 214 13.174 16.726 23.829 1.00 42.74
ATOM 438 N PHE 215 13.468 17.104 26.032 1.00 21.66
ATOM 439 CA PHE 215 12.222 16.471 26.444 1.00 21.66
ATOM 440 CB PHE 215 12.033 16.628 27.958 1.00 28.76
ATOM 441 CG PHE 215 10.751 16.038 28.481 1.00 28.76
ATOM 442 CD1 PHE 215 10.675 14.689 28.815 1.00 28.76
ATOM 443 CD2 PHE 215 9.623 16.835 28.653 1.00 28.76
ATOM 444 CE1 PHE 215 9.493 14.143 29.315 1.00 28.76
ATOM 445 CE2 PHE 215 8.438 16.300 29.150 1.00 28.76
ATOM 446 CZ PHE 215 8.373 14.951 29.482 1.00 28.76
ATOM 447 C PHE 215 11.068 17.132 25.696 1.00 21.66
ATOM 448 O PHE 215 10.215 16.451 25.122 1.00 28.76
ATOM 449 N SER 216 11.073 18.462 25.680 1.00 28.03
ATOM 450 CA SER 216 10.043 19.242 25.007 1.00 28.03
ATOM 451 CB SER 216 10.349 20.734 25.146 1.00 33.85
ATOM 452 OG SER 216 9.300 21.529 24.624 1.00 33.85
ATOM 453 C SER 216 9.945 18.857 23.532 1.00 28.03
ATOM 454 O SER 216 8.852 18.613 23.019 1.00 33.85
ATOM 455 N GLU 217 11.092 18.761 22.868 1.00 28.84
ATOM 456 CA GLU 217 11.138 18.402 21.454 1.00 28.84
ATOM 457 CB GLU 217 12.581 18.420 20.943 1.00 47.68
ATOM 458 CG GLU 217 13.174 19.815 20.811 1.00 47.68
ATOM 459 CD GLU 217 12.405 20.684 19.829 1.00 47.68
ATOM 460 OE1 GLU 217 11.660 21.581 20.281 1.00 47.68
ATOM 461 OE2 GLU 217 12.542 20.465 18.606 1.00 47.68
ATOM 462 C GLU 217 10.505 17.044 21.179 1.00 28.84
ATOM 463 O GLU 217 9.751 16.886 20.217 1.00 47.68
ATOM 464 N PHE 218 10.799 16.071 22.036 1.00 21.49
ATOM 465 CA PHE 218 10.259 14.725 21.883 1.00 21.49
ATOM 466 CB PHE 218 11.020 13.746 22.781 1.00 24.12
ATOM 467 CG PHE 218 12.489 13.652 22.464 1.00 24.12
ATOM 468 CD1 PHE 218 13.431 13.554 23.481 1.00 24.12
ATOM 469 CD2 PHE 218 12.932 13.677 21.144 1.00 24.12
ATOM 470 CE1 PHE 218 14.793 13.484 23.187 1.00 24.12
ATOM 471 CE2 PHE 218 14.290 13.607 20.843 1.00 24.12
ATOM 472 CZ PHE 218 15.221 13.511 21.867 1.00 24.12

ATOM 473 C PHE 218 8.765 14.675 22.176 1.00 21.49
ATOM 474 O PHE 218 7.985 14.166 21.369 1.00 24.12
ATOM 475 N THR 219 8.358 15.227 23.312 1.00 20.07
ATOM 476 CA THR 219 6.949 15.231 23.685 1.00 20.07
ATOM 477 CB THR 219 6.741 15.766 25.118 1.00 28.98
ATOM 478 OG1 THR 219 7.418 17.021 25.274 1.00 28.98
ATOM 479 CG2 THR 219 7.275 14.767 26.132 1.00 28.98
ATOM 480 C THR 219 6.080 16.011 22.696 1.00 20.07
ATOM 481 O THR 219 4.914 15.670 22.482 1.00 28.98
ATOM 482 N LYS 220 6.662 17.022 22.060 1.00 25.35
ATOM 483 CA LYS 220 5.943 17.840 21.088 1.00 25.35
ATOM 484 CB LYS 220 6.842 18.965 20.577 1.00 29.07
ATOM 485 C LYS 220 5.414 17.015 19.916 1.00 25.35
ATOM 486 O LYS 220 4.376 17.343 19.339 1.00 29.07
ATOM 487 N ILE 221 6.122 15.943 19.569 1.00 31.43
ATOM 488 CA ILE 221 5.708 15.089 18.458 1.00 31.43
ATOM 489 CB ILE 221 6.842 14.915 17.413 1.00 25.19
ATOM 490 CG2 ILE 221 7.240 16.264 16.838 1.00 25.19
ATOM 491 CG1 ILE 221 8.050 14.215 18.043 1.00 25.19
ATOM 492 CD1 ILE 221 9.113 13.799 17.044 1.00 25.19
ATOM 493 C ILE 221 5.240 13.700 18.892 1.00 31.43
ATOM 494 O ILE 221 4.930 12.857 18.046 1.00 25.19
ATOM 495 N ILE 222 5.129 13.474 20.198 1.00 24.41
ATOM 496 CA ILE 222 4.720 12.162 20.687 1.00 24.41
ATOM 497 CB ILE 222 5.189 11.916 22.147 1.00 27.10
ATOM 498 CG2 ILE 222 4.221 12.545 23.145 1.00 27.10
ATOM 499 CG1 ILE 222 5.302 10.410 22.400 1.00 27.10
ATOM 500 CD1 ILE 222 6.062 10.053 23.646 1.00 27.10
ATOM 501 C ILE 222 3.231 11.845 20.541 1.00 24.41
ATOM 502 O ILE 222 2.864 10.691 20.307 1.00 27.10
ATOM 503 N THR 223 2.378 12.861 20.642 1.00 33.16
ATOM 504 CA THR 223 0.936 12.653 20.520 1.00 33.16
ATOM 505 CB THR 223 0.150 13.974 20.721 1.00 36.84
ATOM 506 OG1 THR 223 0.352 14.442 22.063 1.00 36.84
ATOM 507 CG2 THR 223 -1.346 13.764 20.484 1.00 36.84
ATOM 508 C THR 223 0.536 11.954 19.212 1.00 33.16
ATOM 509 O THR 223 -0.156 10.932 19.242 1.00 36.84
ATOM 510 N PRO 224 0.968 12.482 18.048 1.00 18.75
ATOM 511 CD PRO 224 1.691 13.735 17.770 1.00 26.12
ATOM 512 CA PRO 224 0.590 11.805 16.802 1.00 18.75
ATOM 513 CB PRO 224 1.117 12.747 15.715 1.00 26.12
ATOM 514 CG PRO 224 2.221 13.497 16.386 1.00 26.12
ATOM 515 C PRO 224 1.200 10.402 16.701 1.00 18.75
ATOM 516 O PRO 224 0.606 9.502 16.101 1.00 26.12
ATOM 517 N ALA 225 2.368 10.213 17.312 1.00 12.19
ATOM 518 CA ALA 225 3.040 8.916 17.300 1.00 12.19
ATOM 519 CB ALA 225 4.415 9.021 17.943 1.00 20.39

```
ATOM   520  C   ALA  225      2.187   7.881  18.030  1.00 12.19
ATOM   521  O   ALA  225      1.998   6.764  17.545  1.00 20.39
ATOM   522  N   ILE  226      1.645   8.271  19.179  1.00 14.61
ATOM   523  CA  ILE  226      0.798   7.385  19.971  1.00 14.61
ATOM   524  CB  ILE  226      0.450   8.025  21.332  1.00 16.10
ATOM   525  CG2 ILE  226     -0.508   7.132  22.108  1.00 16.10
ATOM   526  CG1 ILE  226      1.729   8.293  22.132  1.00 16.10
ATOM   527  CD1 ILE  226      1.509   9.113  23.387  1.00 16.10
ATOM   528  C   ILE  226     -0.499   7.094  19.213  1.00 14.61
ATOM   529  O   ILE  226     -0.986   5.961  19.200  1.00 16.10
ATOM   530  N   THR  227     -1.042   8.123  18.569  1.00 15.93
ATOM   531  CA  THR  227     -2.278   7.997  17.800  1.00 15.93
ATOM   532  CB  THR  227     -2.706   9.360  17.207  1.00 22.37
ATOM   533  OG1 THR  227     -2.890  10.301  18.273  1.00 22.37
ATOM   534  CG2 THR  227     -4.014   9.232  16.434  1.00 22.37
ATOM   535  C   THR  227     -2.149   6.964  16.680  1.00 15.93
ATOM   536  O   THR  227     -3.091   6.217  16.402  1.00 22.37
ATOM   537  N   ARG  228     -0.982   6.916  16.045  1.00 14.49
ATOM   538  CA  ARG  228     -0.750   5.956  14.975  1.00 14.49
ATOM   539  CB  ARG  228      0.602   6.188  14.307  1.00 33.87
ATOM   540  CG  ARG  228      0.701   7.482  13.540  1.00 33.87
ATOM   541  CD  ARG  228      2.053   7.572  12.868  1.00 33.87
ATOM   542  NE  ARG  228      2.510   8.952  12.793  1.00 33.87
ATOM   543  CZ  ARG  228      3.551   9.431  13.469  1.00 33.87
ATOM   544  NH1 ARG  228      4.256   8.634  14.270  1.00 33.87
ATOM   545  NH2 ARG  228      3.864  10.716  13.374  1.00 33.87
ATOM   546  C   ARG  228     -0.813   4.531  15.516  1.00 14.49
ATOM   547  O   ARG  228     -1.309   3.632  14.839  1.00 33.87
ATOM   548  N   VAL  229     -0.313   4.327  16.735  1.00 14.80
ATOM   549  CA  VAL  229     -0.333   3.002  17.352  1.00 14.80
ATOM   550  CB  VAL  229      0.456   2.979  18.683  1.00 13.78
ATOM   551  CG1 VAL  229      0.339   1.612  19.350  1.00 13.78
ATOM   552  CG2 VAL  229      1.915   3.312  18.430  1.00 13.78
ATOM   553  C   VAL  229     -1.788   2.602  17.591  1.00 14.80
ATOM   554  O   VAL  229     -2.185   1.465  17.323  1.00 13.78
ATOM   555  N   VAL  230     -2.588   3.561  18.047  1.00  9.33
ATOM   556  CA  VAL  230     -4.005   3.327  18.292  1.00  9.33
ATOM   557  CB  VAL  230     -4.679   4.564  18.909  1.00 16.07
ATOM   558  CG1 VAL  230     -6.168   4.319  19.076  1.00 16.07
ATOM   559  CG2 VAL  230     -4.038   4.896  20.253  1.00 16.07
ATOM   560  C   VAL  230     -4.700   2.982  16.981  1.00  9.33
ATOM   561  O   VAL  230     -5.504   2.049  16.929  1.00 16.07
ATOM   562  N   ASP  231     -4.364   3.719  15.922  1.00 12.71
ATOM   563  CA  ASP  231     -4.951   3.496  14.603  1.00 12.71
ATOM   564  CB  ASP  231     -4.529   4.596  13.624  1.00 27.08
ATOM   565  CG  ASP  231     -5.053   5.967  14.020  1.00 27.08
ATOM   566  OD1 ASP  231     -6.144   6.047  14.624  1.00 27.08
```

ATOM 567 OD2 ASP 231 -4.370 6.969 13.723 1.00 27.08
ATOM 568 C ASP 231 -4.570 2.132 14.049 1.00 12.71
ATOM 569 O ASP 231 -5.413 1.436 13.483 1.00 27.08
ATOM 570 N PHE 232 -3.305 1.755 14.215 1.00 14.33
ATOM 571 CA PHE 232 -2.823 0.461 13.748 1.00 14.33
ATOM 572 CB PHE 232 -1.351 0.257 14.134 1.00 16.35
ATOM 573 CG PHE 232 -0.911 -1.184 14.097 1.00 16.35
ATOM 574 CD1 PHE 232 -0.789 -1.862 12.887 1.00 16.35
ATOM 575 CD2 PHE 232 -0.661 -1.879 15.280 1.00 16.35
ATOM 576 CE1 PHE 232 -0.430 -3.208 12.851 1.00 16.35
ATOM 577 CE2 PHE 232 -0.302 -3.224 15.255 1.00 16.35
ATOM 578 CZ PHE 232 -0.187 -3.890 14.038 1.00 16.35
ATOM 579 C PHE 232 -3.670 -0.642 14.368 1.00 14.33
ATOM 580 O PHE 232 -4.226 -1.482 13.661 1.00 16.35
ATOM 581 N ALA 233 -3.769 -0.619 15.695 1.00 15.30
ATOM 582 CA ALA 233 -4.537 -1.607 16.444 1.00 15.30
ATOM 583 CB ALA 233 -4.413 -1.335 17.938 1.00 12.88
ATOM 584 C ALA 233 -6.005 -1.609 16.030 1.00 15.30
ATOM 585 O ALA 233 -6.627 -2.663 15.902 1.00 12.88
ATOM 586 N LYS 234 -6.542 -0.419 15.795 1.00 25.69
ATOM 587 CA LYS 234 -7.933 -0.256 15.401 1.00 25.69
ATOM 588 CB LYS 234 -8.270 1.234 15.318 1.00 45.91
ATOM 589 CG LYS 234 -9.574 1.595 15.979 1.00 45.91
ATOM 590 CD LYS 234 -9.535 1.268 17.463 1.00 45.91
ATOM 591 CE LYS 234 -10.938 1.047 18.006 1.00 45.91
ATOM 592 NZ LYS 234 -11.605 -0.106 17.327 1.00 45.91
ATOM 593 C LYS 234 -8.240 -0.931 14.067 1.00 25.69
ATOM 594 O LYS 234 -9.368 -1.368 13.827 1.00 45.91
ATOM 595 N LYS 235 -7.234 -1.019 13.204 1.00 17.44
ATOM 596 CA LYS 235 -7.406 -1.627 11.892 1.00 17.44
ATOM 597 CB LYS 235 -6.459 -0.975 10.884 1.00 26.26
ATOM 598 CG LYS 235 -6.757 0.499 10.669 1.00 26.26
ATOM 599 CD LYS 235 -5.785 1.141 9.706 1.00 26.26
ATOM 600 CE LYS 235 -6.154 2.593 9.460 1.00 26.26
ATOM 601 NZ LYS 235 -5.231 3.230 8.484 1.00 26.26
ATOM 602 C LYS 235 -7.258 -3.146 11.875 1.00 17.44
ATOM 603 O LYS 235 -7.365 -3.773 10.817 1.00 26.26
ATOM 604 N LEU 236 -7.015 -3.738 13.040 1.00 21.99
ATOM 605 CA LEU 236 -6.880 -5.187 13.144 1.00 21.99
ATOM 606 CB LEU 236 -5.792 -5.564 14.154 1.00 25.38
ATOM 607 CG LEU 236 -4.362 -5.127 13.818 1.00 25.38
ATOM 608 CD1 LEU 236 -3.415 -5.555 14.929 1.00 25.38
ATOM 609 CD2 LEU 236 -3.931 -5.725 12.491 1.00 25.38
ATOM 610 C LEU 236 -8.219 -5.796 13.556 1.00 21.99
ATOM 611 O LEU 236 -8.821 -5.386 14.553 1.00 25.38
ATOM 612 N PRO 237 -8.682 -6.819 12.817 1.00 34.89
ATOM 613 CD PRO 237 -7.936 -7.474 11.730 1.00 42.99

```
ATOM   614  CA  PRO   237      -9.953  -7.513  13.071  1.00 34.89
ATOM   615  CB  PRO   237      -9.911  -8.687  12.084  1.00 42.99
ATOM   616  CG  PRO   237      -8.433  -8.887  11.816  1.00 42.99
ATOM   617  C   PRO   237     -10.184  -7.986  14.513  1.00 34.89
ATOM   618  O   PRO   237     -11.142  -7.563  15.159  1.00 42.99
ATOM   619  N   MET   238      -9.301  -8.843  15.021  1.00 40.45
ATOM   620  CA  MET   238      -9.433  -9.364  16.382  1.00 40.45
ATOM   621  CB  MET   238      -8.360 -10.423  16.671  1.00 59.70
ATOM   622  CG  MET   238      -8.689 -11.839  16.195  1.00 59.70
ATOM   623  SD  MET   238      -8.013 -12.275  14.573  1.00 59.70
ATOM   624  CE  MET   238      -6.482 -13.074  15.032  1.00 59.70
ATOM   625  C   MET   238      -9.395  -8.305  17.486  1.00 40.45
ATOM   626  O   MET   238      -9.801  -8.574  18.617  1.00 59.70
ATOM   627  N   PHE   239      -8.928  -7.103  17.160  1.00 33.70
ATOM   628  CA  PHE   239      -8.829  -6.037  18.152  1.00 33.70
ATOM   629  CB  PHE   239      -7.651  -5.113  17.829  1.00 22.27
ATOM   630  CG  PHE   239      -7.386  -4.079  18.885  1.00 22.27
ATOM   631  CD1 PHE   239      -6.602  -4.385  19.990  1.00 22.27
ATOM   632  CD2 PHE   239      -7.926  -2.802  18.778  1.00 22.27
ATOM   633  CE1 PHE   239      -6.358  -3.436  20.974  1.00 22.27
ATOM   634  CE2 PHE   239      -7.688  -1.846  19.757  1.00 22.27
ATOM   635  CZ  PHE   239      -6.901  -2.163  20.857  1.00 22.27
ATOM   636  C   PHE   239     -10.103  -5.213  18.329  1.00 33.70
ATOM   637  O   PHE   239     -10.594  -5.059  19.446  1.00 22.27
ATOM   638  N   SER   240     -10.629  -4.679  17.232  1.00 23.42
ATOM   639  CA  SER   240     -11.837  -3.857  17.278  1.00 23.42
ATOM   640  CB  SER   240     -12.175  -3.352  15.884  1.00 26.21
ATOM   641  C   SER   240     -13.046  -4.562  17.899  1.00 23.42
ATOM   642  O   SER   240     -13.976  -3.909  18.369  1.00 26.21
ATOM   643  N   GLU   241     -13.028  -5.891  17.893  1.00 26.54
ATOM   644  CA  GLU   241     -14.116  -6.695  18.450  1.00 26.54
ATOM   645  CB  GLU   241     -14.007  -8.139  17.957  1.00 67.32
ATOM   646  CG  GLU   241     -14.241  -8.322  16.467  1.00 67.32
ATOM   647  CD  GLU   241     -13.979  -9.748  16.001  1.00 67.32
ATOM   648  OE1 GLU   241     -14.161 -10.691  16.803  1.00 67.32
ATOM   649  OE2 GLU   241     -13.584  -9.924  14.828  1.00 67.32
ATOM   650  C   GLU   241     -14.137  -6.706  19.975  1.00 26.54
ATOM   651  O   GLU   241     -15.182  -6.924  20.589  1.00 67.32
ATOM   652  N   LEU   242     -12.972  -6.506  20.579  1.00 26.16
ATOM   653  CA  LEU   242     -12.835  -6.514  22.030  1.00 26.16
ATOM   654  CB  LEU   242     -11.352  -6.473  22.412  1.00 19.79
ATOM   655  CG  LEU   242     -10.461  -7.627  21.956  1.00 19.79
ATOM   656  CD1 LEU   242      -9.014  -7.309  22.264  1.00 19.79
ATOM   657  CD2 LEU   242     -10.888  -8.912  22.640  1.00 19.79
ATOM   658  C   LEU   242     -13.547  -5.351  22.711  1.00 26.16
ATOM   659  O   LEU   242     -13.738  -4.290  22.115  1.00 19.79
ATOM   660  N   PRO   243     -13.980  -5.547  23.968  1.00 17.98
```

```
ATOM   661  CD  PRO   243     -13.996  -6.785  24.764  1.00 19.17
ATOM   662  CA  PRO   243     -14.657  -4.454  24.671  1.00 17.98
ATOM   663  CB  PRO   243     -15.095  -5.105  25.988  1.00 19.17
ATOM   664  CG  PRO   243     -14.155  -6.263  26.161  1.00 19.17
ATOM   665  C   PRO   243     -13.652  -3.323  24.898  1.00 17.98
ATOM   666  O   PRO   243     -12.458  -3.572  25.081  1.00 19.17
ATOM   667  N   CYS   244     -14.142  -2.088  24.880  1.00 20.08
ATOM   668  CA  CYS   244     -13.310  -0.900  25.059  1.00 20.08
ATOM   669  CB  CYS   244     -14.194   0.329  25.278  1.00 61.80
ATOM   670  SG  CYS   244     -13.674   1.784  24.340  1.00 61.80
ATOM   671  C   CYS   244     -12.286  -1.017  26.189  1.00 20.08
ATOM   672  O   CYS   244     -11.141  -0.590  26.040  1.00 61.80
ATOM   673  N   GLU   245     -12.691  -1.630  27.299  1.00 21.05
ATOM   674  CA  GLU   245     -11.814  -1.811  28.454  1.00 21.05
ATOM   675  CB  GLU   245     -12.541  -2.560  29.578  1.00 40.41
ATOM   676  CG  GLU   245     -13.510  -1.705  30.393  1.00 40.41
ATOM   677  CD  GLU   245     -14.953  -1.773  29.910  1.00 40.41
ATOM   678  OE1 GLU   245     -15.854  -1.761  30.775  1.00 40.41
ATOM   679  OE2 GLU   245     -15.197  -1.824  28.683  1.00 40.41
ATOM   680  C   GLU   245     -10.541  -2.558  28.084  1.00 21.05
ATOM   681  O   GLU   245      -9.439  -2.138  28.440  1.00 40.41
ATOM   682  N   ASP   246     -10.698  -3.654  27.351  1.00 17.22
ATOM   683  CA  ASP   246      -9.564  -4.463  26.924  1.00 17.22
ATOM   684  CB  ASP   246     -10.044  -5.774  26.303  1.00 30.41
ATOM   685  CG  ASP   246     -10.634  -6.727  27.327  1.00 30.41
ATOM   686  OD1 ASP   246     -10.755  -6.349  28.512  1.00 30.41
ATOM   687  OD2 ASP   246     -10.975  -7.864  26.946  1.00 30.41
ATOM   688  C   ASP   246      -8.693  -3.705  25.936  1.00 17.22
ATOM   689  O   ASP   246      -7.467  -3.713  26.050  1.00 30.41
ATOM   690  N   GLN   247      -9.332  -3.045  24.973  1.00 17.12
ATOM   691  CA  GLN   247      -8.615  -2.272  23.966  1.00 17.12
ATOM   692  CB  GLN   247      -9.594  -1.494  23.088  1.00 16.72
ATOM   693  CG  GLN   247     -10.504  -2.365  22.242  1.00 16.72
ATOM   694  CD  GLN   247     -11.352  -1.553  21.290  1.00 16.72
ATOM   695  OE1 GLN   247     -10.925  -0.515  20.790  1.00 16.72
ATOM   696  NE2 GLN   247     -12.560  -2.018  21.033  1.00 16.72
ATOM   697  C   GLN   247      -7.650  -1.303  24.637  1.00 17.12
ATOM   698  O   GLN   247      -6.476  -1.228  24.273  1.00 16.72
ATOM   699  N   ILE   248      -8.152  -0.591  25.640  1.00 19.19
ATOM   700  CA  ILE   248      -7.358   0.377  26.387  1.00 19.19
ATOM   701  CB  ILE   248      -8.238   1.137  27.410  1.00 24.32
ATOM   702  CG2 ILE   248      -7.385   2.055  28.282  1.00 24.32
ATOM   703  CG1 ILE   248      -9.312   1.942  26.668  1.00 24.32
ATOM   704  CD1 ILE   248     -10.327   2.618  27.573  1.00 24.32
ATOM   705  C   ILE   248      -6.180  -0.297  27.093  1.00 19.19
ATOM   706  O   ILE   248      -5.035   0.131  26.943  1.00 24.32
ATOM   707  N   ILE   249      -6.457  -1.367  27.830  1.00 12.09
```

```
ATOM   708  CA  ILE  249      -5.409  -2.090  28.547  1.00 12.09
ATOM   709  CB  ILE  249      -5.996  -3.295  29.322  1.00 30.01
ATOM   710  CG2 ILE  249      -4.884  -4.168  29.885  1.00 30.01
ATOM   711  CG1 ILE  249      -6.899  -2.794  30.451  1.00 30.01
ATOM   712  CD1 ILE  249      -7.598  -3.893  31.215  1.00 30.01
ATOM   713  C   ILE  249      -4.299  -2.561  27.602  1.00 12.09
ATOM   714  O   ILE  249      -3.115  -2.339  27.866  1.00 30.01
ATOM   715  N   LEU  250      -4.691  -3.168  26.486  1.00 20.87
ATOM   716  CA  LEU  250      -3.740  -3.669  25.498  1.00 20.87
ATOM   717  CB  LEU  250      -4.474  -4.410  24.376  1.00 15.15
ATOM   718  CG  LEU  250      -5.252  -5.669  24.761  1.00 15.15
ATOM   719  CD1 LEU  250      -5.907  -6.256  23.533  1.00 15.15
ATOM   720  CD2 LEU  250      -4.325  -6.686  25.400  1.00 15.15
ATOM   721  C   LEU  250      -2.900  -2.548  24.902  1.00 20.87
ATOM   722  O   LEU  250      -1.680  -2.667  24.792  1.00 15.15
ATOM   723  N   LEU  251      -3.559  -1.455  24.532  1.00  9.31
ATOM   724  CA  LEU  251      -2.887  -0.301  23.945  1.00  9.31
ATOM   725  CB  LEU  251      -3.920   0.760  23.553  1.00 19.90
ATOM   726  CG  LEU  251      -4.075   1.127  22.073  1.00 19.90
ATOM   727  CD1 LEU  251      -3.281   0.190  21.180  1.00 19.90
ATOM   728  CD2 LEU  251      -5.550   1.113  21.699  1.00 19.90
ATOM   729  C   LEU  251      -1.851   0.307  24.887  1.00  9.31
ATOM   730  O   LEU  251      -0.699   0.521  24.507  1.00 19.90
ATOM   731  N   LYS  252      -2.253   0.545  26.127  1.00 18.83
ATOM   732  CA  LYS  252      -1.362   1.132  27.114  1.00 18.83
ATOM   733  CB  LYS  252      -2.138   1.455  28.395  1.00 42.69
ATOM   734  CG  LYS  252      -3.395   2.274  28.130  1.00 42.69
ATOM   735  CD  LYS  252      -3.588   3.412  29.115  1.00 42.69
ATOM   736  CE  LYS  252      -3.998   2.934  30.493  1.00 42.69
ATOM   737  NZ  LYS  252      -4.300   4.109  31.361  1.00 42.69
ATOM   738  C   LYS  252      -0.171   0.222  27.408  1.00 18.83
ATOM   739  O   LYS  252       0.942   0.700  27.646  1.00 42.69
ATOM   740  N   GLY  253      -0.392  -1.086  27.328  1.00 16.16
ATOM   741  CA  GLY  253       0.676  -2.031  27.595  1.00 16.16
ATOM   742  C   GLY  253       1.688  -2.232  26.479  1.00 16.16
ATOM   743  O   GLY  253       2.836  -2.587  26.747  1.00 34.57
ATOM   744  N   CYS  254       1.286  -1.999  25.233  1.00 21.81
ATOM   745  CA  CYS  254       2.194  -2.203  24.108  1.00 21.81
ATOM   746  CB  CYS  254       1.563  -3.151  23.093  1.00 23.60
ATOM   747  SG  CYS  254       0.211  -2.387  22.179  1.00 23.60
ATOM   748  C   CYS  254       2.616  -0.935  23.380  1.00 21.81
ATOM   749  O   CYS  254       3.499  -0.983  22.521  1.00 23.60
ATOM   750  N   CYS  255       2.004   0.193  23.724  1.00 14.98
ATOM   751  CA  CYS  255       2.309   1.461  23.066  1.00 14.98
ATOM   752  CB  CYS  255       1.611   2.616  23.781  1.00 24.32
ATOM   753  SG  CYS  255       1.602   4.153  22.841  1.00 24.32
ATOM   754  C   CYS  255       3.804   1.750  22.922  1.00 14.98
```

ATOM 755 O CYS 255 4.305 1.895 21.805 1.00 24.32
ATOM 756 N MET 256 4.525 1.777 24.037 1.00 13.77
ATOM 757 CA MET 256 5.959 2.056 24.003 1.00 13.77
ATOM 758 CB MET 256 6.515 2.218 25.423 1.00 19.23
ATOM 759 CG MET 256 7.988 2.607 25.477 1.00 19.23
ATOM 760 SD MET 256 8.344 4.132 24.571 1.00 19.23
ATOM 761 CE MET 256 10.127 4.254 24.782 1.00 19.23
ATOM 762 C MET 256 6.734 0.978 23.246 1.00 13.77
ATOM 763 O MET 256 7.672 1.284 22.516 1.00 19.23
ATOM 764 N GLU 257 6.316 -0.275 23.400 1.00 12.57
ATOM 765 CA GLU 257 6.971 -1.397 22.730 1.00 12.57
ATOM 766 CB GLU 257 6.342 -2.716 23.182 1.00 31.54
ATOM 767 CG GLU 257 6.497 -2.982 24.677 1.00 31.54
ATOM 768 CD GLU 257 5.720 -4.196 25.167 1.00 31.54
ATOM 769 OE1 GLU 257 5.220 -4.983 24.334 1.00 31.54
ATOM 770 OE2 GLU 257 5.607 -4.361 26.400 1.00 31.54
ATOM 771 C GLU 257 6.889 -1.254 21.211 1.00 12.57
ATOM 772 O GLU 257 7.881 -1.452 20.505 1.00 31.54
ATOM 773 N ILE 258 5.712 -0.881 20.717 1.00 17.89
ATOM 774 CA ILE 258 5.508 -0.692 19.288 1.00 17.89
ATOM 775 CB ILE 258 4.001 -0.555 18.946 1.00 15.57
ATOM 776 CG2 ILE 258 3.813 -0.129 17.493 1.00 15.57
ATOM 777 CG1 ILE 258 3.288 -1.886 19.211 1.00 15.57
ATOM 778 CD1 ILE 258 1.798 -1.872 18.922 1.00 15.57
ATOM 779 C ILE 258 6.289 0.535 18.811 1.00 17.89
ATOM 780 O ILE 258 7.000 0.468 17.805 1.00 15.57
ATOM 781 N MET 259 6.196 1.636 19.556 1.00 11.23
ATOM 782 CA MET 259 6.907 2.861 19.201 1.00 11.23
ATOM 783 CB MET 259 6.568 3.995 20.175 1.00 22.19
ATOM 784 CG MET 259 5.112 4.439 20.117 1.00 22.19
ATOM 785 SD MET 259 4.828 6.033 20.915 1.00 22.19
ATOM 786 CE MET 259 5.038 5.606 22.621 1.00 22.19
ATOM 787 C MET 259 8.415 2.637 19.131 1.00 11.23
ATOM 788 O MET 259 9.060 3.008 18.145 1.00 22.19
ATOM 789 N SER 260 8.974 1.994 20.153 1.00 8.59
ATOM 790 CA SER 260 10.408 1.706 20.195 1.00 8.59
ATOM 791 CB SER 260 10.763 0.939 21.472 1.00 23.39
ATOM 792 OG SER 260 10.430 1.685 22.623 1.00 23.39
ATOM 793 C SER 260 10.793 0.864 18.977 1.00 8.59
ATOM 794 O SER 260 11.824 1.100 18.350 1.00 23.39
ATOM 795 N LEU 261 9.952 -0.111 18.644 1.00 13.26
ATOM 796 CA LEU 261 10.194 -0.992 17.507 1.00 13.26
ATOM 797 CB LEU 261 9.076 -2.035 17.401 1.00 14.32
ATOM 798 CG LEU 261 9.019 -2.894 16.134 1.00 14.32
ATOM 799 CD1 LEU 261 10.278 -3.733 15.999 1.00 14.32
ATOM 800 CD2 LEU 261 7.785 -3.772 16.174 1.00 14.32
ATOM 801 C LEU 261 10.276 -0.170 16.220 1.00 13.26

ATOM 802 O LEU 261 11.213 -0.313 15.432 1.00 14.32
ATOM 803 N ARG 262 9.330 0.744 16.043 1.00 10.57
ATOM 804 CA ARG 262 9.278 1.598 14.861 1.00 10.57
ATOM 805 CB ARG 262 8.018 2.454 14.917 1.00 16.08
ATOM 806 CG ARG 262 6.755 1.647 14.728 1.00 16.08
ATOM 807 CD ARG 262 5.540 2.525 14.614 1.00 16.08
ATOM 808 NE ARG 262 4.418 1.765 14.076 1.00 16.08
ATOM 809 CZ ARG 262 3.260 2.289 13.689 1.00 16.08
ATOM 810 NH1 ARG 262 3.050 3.596 13.780 1.00 16.08
ATOM 811 NH2 ARG 262 2.322 1.497 13.183 1.00 16.08
ATOM 812 C ARG 262 10.530 2.471 14.704 1.00 10.57
ATOM 813 O ARG 262 11.038 2.649 13.589 1.00 16.08
ATOM 814 N ALA 263 11.016 3.014 15.820 1.00 13.37
ATOM 815 CA ALA 263 12.221 3.842 15.831 1.00 13.37
ATOM 816 CB ALA 263 12.363 4.516 17.172 1.00 17.12
ATOM 817 C ALA 263 13.443 2.964 15.561 1.00 13.37
ATOM 818 O ALA 263 14.313 3.316 14.762 1.00 17.12
ATOM 819 N ALA 264 13.474 1.802 16.207 1.00 16.55
ATOM 820 CA ALA 264 14.574 0.855 16.072 1.00 16.55
ATOM 821 CB ALA 264 14.375 -0.327 17.019 1.00 24.62
ATOM 822 C ALA 264 14.770 0.364 14.642 1.00 16.55
ATOM 823 O ALA 264 15.904 0.244 14.169 1.00 24.62
ATOM 824 N VAL 265 13.670 0.073 13.955 1.00 22.25
ATOM 825 CA VAL 265 13.754 -0.401 12.583 1.00 22.25
ATOM 826 CB VAL 265 12.428 -1.038 12.086 1.00 25.31
ATOM 827 CG1 VAL 265 12.079 -2.239 12.936 1.00 25.31
ATOM 828 CG2 VAL 265 11.302 -0.030 12.091 1.00 25.31
ATOM 829 C VAL 265 14.208 0.707 11.639 1.00 22.25
ATOM 830 O VAL 265 14.615 0.434 10.513 1.00 25.31
ATOM 831 N ARG 266 14.124 1.955 12.092 1.00 26.45
ATOM 832 CA ARG 266 14.567 3.086 11.283 1.00 26.45
ATOM 833 CB ARG 266 13.596 4.261 11.399 1.00 38.04
ATOM 834 CG ARG 266 12.232 4.019 10.807 1.00 38.04
ATOM 835 CD ARG 266 11.503 5.339 10.651 1.00 38.04
ATOM 836 NE ARG 266 10.074 5.216 10.925 1.00 38.04
ATOM 837 CZ ARG 266 9.504 5.551 12.079 1.00 38.04
ATOM 838 NH1 ARG 266 10.237 6.038 13.075 1.00 38.04
ATOM 839 NH2 ARG 266 8.196 5.411 12.240 1.00 38.04
ATOM 840 C ARG 266 15.957 3.531 11.729 1.00 26.45
ATOM 841 O ARG 266 16.296 4.717 11.660 1.00 38.04
ATOM 842 N TYR 267 16.733 2.590 12.251 1.00 24.87
ATOM 843 CA TYR 267 18.083 2.888 12.700 1.00 24.87
ATOM 844 CB TYR 267 18.592 1.788 13.639 1.00 25.84
ATOM 845 CG TYR 267 20.073 1.865 13.931 1.00 25.84
ATOM 846 CD1 TYR 267 20.579 2.789 14.844 1.00 25.84
ATOM 847 CE1 TYR 267 21.940 2.865 15.103 1.00 25.84
ATOM 848 CD2 TYR 267 20.971 1.017 13.284 1.00 25.84

ATOM 849 CE2 TYR 267 22.331 1.085 13.536 1.00 25.84
ATOM 850 CZ TYR 267 22.810 2.011 14.444 1.00 25.84
ATOM 851 OH TYR 267 24.162 2.078 14.683 1.00 25.84
ATOM 852 C TYR 267 18.999 3.009 11.488 1.00 24.87
ATOM 853 O TYR 267 19.019 2.130 10.625 1.00 25.84
ATOM 854 N ASP 268 19.751 4.102 11.423 1.00 28.13
ATOM 855 CA ASP 268 20.666 4.320 10.313 1.00 28.13
ATOM 856 CB ASP 268 20.524 5.744 9.773 1.00 51.63
ATOM 857 CG ASP 268 21.339 5.973 8.517 1.00 51.63
ATOM 858 OD1 ASP 268 21.060 5.305 7.498 1.00 51.63
ATOM 859 OD2 ASP 268 22.262 6.814 8.547 1.00 51.63
ATOM 860 C ASP 268 22.105 4.068 10.749 1.00 28.13
ATOM 861 O ASP 268 22.683 4.854 11.500 1.00 51.63
ATOM 862 N PRO 269 22.707 2.964 10.276 1.00 37.07
ATOM 863 CD PRO 269 22.103 1.938 9.410 1.00 39.18
ATOM 864 CA PRO 269 24.086 2.612 10.623 1.00 37.07
ATOM 865 CB PRO 269 24.319 1.324 9.832 1.00 39.18
ATOM 866 CG PRO 269 22.950 0.735 9.706 1.00 39.18
ATOM 867 C PRO 269 25.079 3.698 10.216 1.00 37.07
ATOM 868 O PRO 269 26.003 4.006 10.964 1.00 39.18
ATOM 869 N ALA 270 24.855 4.295 9.047 1.00 46.88
ATOM 870 CA ALA 270 25.730 5.340 8.519 1.00 46.88
ATOM 871 CB ALA 270 25.177 5.873 7.198 1.00 41.71
ATOM 872 C ALA 270 25.974 6.493 9.492 1.00 46.88
ATOM 873 O ALA 270 27.121 6.844 9.763 1.00 41.71
ATOM 874 N SER 271 24.899 7.081 10.009 1.00 34.54
ATOM 875 CA SER 271 25.013 8.198 10.941 1.00 34.54
ATOM 876 CB SER 271 23.959 9.259 10.618 1.00 42.29
ATOM 877 OG SER 271 22.686 8.668 10.422 1.00 42.29
ATOM 878 C SER 271 24.910 7.793 12.408 1.00 34.54
ATOM 879 O SER 271 25.169 8.607 13.297 1.00 42.29
ATOM 880 N ASP 272 24.546 6.535 12.653 1.00 41.05
ATOM 881 CA ASP 272 24.388 6.005 14.007 1.00 41.05
ATOM 882 CB ASP 272 25.720 6.078 14.772 1.00 47.32
ATOM 883 CG ASP 272 25.653 5.428 16.147 1.00 47.32
ATOM 884 OD1 ASP 272 24.981 4.384 16.299 1.00 47.32
ATOM 885 OD2 ASP 272 26.284 5.967 17.081 1.00 47.32
ATOM 886 C ASP 272 23.279 6.777 14.730 1.00 41.05
ATOM 887 O ASP 272 23.444 7.233 15.866 1.00 47.32
ATOM 888 N THR 273 22.139 6.905 14.058 1.00 27.60
ATOM 889 CA THR 273 20.996 7.618 14.608 1.00 27.60
ATOM 890 CB THR 273 20.808 8.991 13.911 1.00 30.96
ATOM 891 OG1 THR 273 20.723 8.808 12.491 1.00 30.96
ATOM 892 CG2 THR 273 21.967 9.924 14.228 1.00 30.96
ATOM 893 C THR 273 19.701 6.829 14.442 1.00 27.60
ATOM 894 O THR 273 19.633 5.883 13.650 1.00 30.96
ATOM 895 N LEU 274 18.696 7.192 15.232 1.00 20.89

ATOM 896 CA LEU 274 17.374 6.574 15.161 1.00 20.89
ATOM 897 CB LEU 274 16.862 6.193 16.555 1.00 22.48
ATOM 898 CG LEU 274 17.480 5.009 17.301 1.00 22.48
ATOM 899 CD1 LEU 274 16.798 4.866 18.650 1.00 22.48
ATOM 900 CD2 LEU 274 17.317 3.736 16.497 1.00 22.48
ATOM 901 C LEU 274 16.470 7.654 14.586 1.00 20.89
ATOM 902 O LEU 274 16.753 8.842 14.744 1.00 22.48
ATOM 903 N THR 275 15.393 7.258 13.922 1.00 27.89
ATOM 904 CA THR 275 14.478 8.235 13.354 1.00 27.89
ATOM 905 CB THR 275 14.325 8.045 11.832 1.00 37.64
ATOM 906 OG1 THR 275 15.622 7.983 11.228 1.00 37.64
ATOM 907 CG2 THR 275 13.570 9.215 11.222 1.00 37.64
ATOM 908 C THR 275 13.120 8.135 14.032 1.00 27.89
ATOM 909 O THR 275 12.493 7.081 14.019 1.00 37.64
ATOM 910 N LEU 276 12.700 9.226 14.667 1.00 28.07
ATOM 911 CA LEU 276 11.418 9.275 15.358 1.00 28.07
ATOM 912 CB LEU 276 11.497 10.214 16.572 1.00 24.81
ATOM 913 CG LEU 276 12.639 10.005 17.577 1.00 24.81
ATOM 914 CD1 LEU 276 12.450 10.929 18.769 1.00 24.81
ATOM 915 CD2 LEU 276 12.692 8.558 18.038 1.00 24.81
ATOM 916 C LEU 276 10.339 9.761 14.395 1.00 28.07
ATOM 917 O LEU 276 10.533 10.760 13.691 1.00 24.81
ATOM 918 N SER 277 9.232 9.027 14.331 1.00 29.24
ATOM 919 CA SER 277 8.106 9.357 13.458 1.00 29.24
ATOM 920 CB SER 277 7.369 10.594 13.985 1.00 30.56
ATOM 921 OG SER 277 6.845 10.358 15.283 1.00 30.56
ATOM 922 C SER 277 8.533 9.569 12.005 1.00 29.24
ATOM 923 O SER 277 7.902 10.326 11.263 1.00 30.56
ATOM 924 N GLY 278 9.619 8.908 11.618 1.00 34.41
ATOM 925 CA GLY 278 10.135 9.024 10.263 1.00 34.41
ATOM 926 C GLY 278 10.472 10.442 9.830 1.00 34.41
ATOM 927 O GLY 278 10.516 10.725 8.631 1.00 44.04
ATOM 928 N GLU 279 10.733 11.326 10.791 1.00 37.82
ATOM 929 CA GLU 279 11.056 12.717 10.479 1.00 37.82
ATOM 930 CB GLU 279 9.808 13.600 10.612 1.00 70.24
ATOM 931 CG GLU 279 9.202 13.631 12.014 1.00 70.24
ATOM 932 CD GLU 279 8.028 14.593 12.141 1.00 70.24
ATOM 933 OE1 GLU 279 8.028 15.406 13.093 1.00 70.24
ATOM 934 OE2 GLU 279 7.103 14.535 11.301 1.00 70.24
ATOM 935 C GLU 279 12.192 13.321 11.300 1.00 37.82
ATOM 936 O GLU 279 12.857 14.248 10.841 1.00 70.24
ATOM 937 N MET 280 12.424 12.811 12.505 1.00 33.77
ATOM 938 CA MET 280 13.482 13.360 13.344 1.00 33.77
ATOM 939 CB MET 280 12.903 13.848 14.674 1.00 33.89
ATOM 940 CG MET 280 13.898 14.595 15.545 1.00 33.89
ATOM 941 SD MET 280 13.350 14.740 17.256 1.00 33.89
ATOM 942 CE MET 280 12.100 16.017 17.121 1.00 33.89

```
ATOM   943  C   MET  280      14.620  12.383  13.613  1.00 33.77
ATOM   944  O   MET  280      14.432  11.366  14.282  1.00 33.89
ATOM   945  N   ALA  281      15.797  12.690  13.080  1.00 30.24
ATOM   946  CA  ALA  281      16.972  11.852  13.287  1.00 30.24
ATOM   947  CB  ALA  281      17.937  11.998  12.120  1.00 25.10
ATOM   948  C   ALA  281      17.631  12.309  14.587  1.00 30.24
ATOM   949  O   ALA  281      18.008  13.477  14.718  1.00 25.10
ATOM   950  N   VAL  282      17.743  11.401  15.551  1.00 32.12
ATOM   951  CA  VAL  282      18.339  11.726  16.844  1.00 32.12
ATOM   952  CB  VAL  282      17.303  11.606  17.991  1.00 37.75
ATOM   953  CG1 VAL  282      16.184  12.615  17.799  1.00 37.75
ATOM   954  CG2 VAL  282      16.739  10.193  18.055  1.00 37.75
ATOM   955  C   VAL  282      19.543  10.852  17.181  1.00 32.12
ATOM   956  O   VAL  282      19.614   9.690  16.778  1.00 37.75
ATOM   957  N   LYS  283      20.491  11.428  17.913  1.00 26.82
ATOM   958  CA  LYS  283      21.700  10.722  18.328  1.00 26.82
ATOM   959  CB  LYS  283      22.894  11.679  18.342  1.00 57.25
ATOM   960  CG  LYS  283      23.258  12.245  16.979  1.00 57.25
ATOM   961  CD  LYS  283      24.282  13.361  17.105  1.00 57.25
ATOM   962  CE  LYS  283      24.752  13.836  15.741  1.00 57.25
ATOM   963  NZ  LYS  283      25.518  12.772  15.033  1.00 57.25
ATOM   964  C   LYS  283      21.509  10.120  19.717  1.00 26.82
ATOM   965  O   LYS  283      20.648  10.566  20.477  1.00 57.25
ATOM   966  N   ARG  284      22.351   9.146  20.058  1.00 26.41
ATOM   967  CA  ARG  284      22.297   8.457  21.351  1.00 26.41
ATOM   968  CB  ARG  284      23.527   7.566  21.528  1.00 41.02
ATOM   969  CG  ARG  284      23.715   6.539  20.440  1.00 41.02
ATOM   970  CD  ARG  284      25.016   5.794  20.616  1.00 41.02
ATOM   971  NE  ARG  284      25.145   4.730  19.630  1.00 41.02
ATOM   972  CZ  ARG  284      24.759   3.475  19.831  1.00 41.02
ATOM   973  NH1 ARG  284      24.221   3.117  20.990  1.00 41.02
ATOM   974  NH2 ARG  284      24.886   2.584  18.859  1.00 41.02
ATOM   975  C   ARG  284      22.200   9.399  22.543  1.00 26.41
ATOM   976  O   ARG  284      21.296   9.278  23.370  1.00 41.02
ATOM   977  N   GLU  285      23.152  10.321  22.634  1.00 33.23
ATOM   978  CA  GLU  285      23.201  11.292  23.721  1.00 33.23
ATOM   979  CB  GLU  285      24.366  12.258  23.492  1.00 69.82
ATOM   980  CG  GLU  285      24.485  13.359  24.533  1.00 69.82
ATOM   981  CD  GLU  285      25.079  14.636  23.964  1.00 69.82
ATOM   982  OE1 GLU  285      26.309  14.826  24.070  1.00 69.82
ATOM   983  OE2 GLU  285      24.309  15.453  23.409  1.00 69.82
ATOM   984  C   GLU  285      21.898  12.082  23.823  1.00 33.23
ATOM   985  O   GLU  285      21.336  12.239  24.907  1.00 69.82
ATOM   986  N   GLN  286      21.414  12.551  22.677  1.00 28.07
ATOM   987  CA  GLN  286      20.194  13.346  22.614  1.00 28.07
ATOM   988  CB  GLN  286      19.948  13.824  21.181  1.00 41.05
ATOM   989  CG  GLN  286      21.051  14.726  20.639  1.00 41.05
```

ATOM 990 CD GLN 286 20.808 15.154 19.202 1.00 41.05
ATOM 991 OE1 GLN 286 20.783 14.322 18.293 1.00 41.05
ATOM 992 NE2 GLN 286 20.635 16.452 18.990 1.00 41.05
ATOM 993 C GLN 286 18.955 12.642 23.162 1.00 28.07
ATOM 994 O GLN 286 18.281 13.174 24.048 1.00 41.05
ATOM 995 N LEU 287 18.663 11.447 22.658 1.00 30.11
ATOM 996 CA LEU 287 17.492 10.705 23.116 1.00 30.11
ATOM 997 CB LEU 287 17.232 9.489 22.219 1.00 21.70
ATOM 998 CG LEU 287 15.859 8.821 22.357 1.00 21.70
ATOM 999 CD1 LEU 287 14.748 9.818 22.061 1.00 21.70
ATOM 1000 CD2 LEU 287 15.763 7.628 21.421 1.00 21.70
ATOM 1001 C LEU 287 17.641 10.277 24.577 1.00 30.11
ATOM 1002 O LEU 287 16.655 10.212 25.320 1.00 21.70
ATOM 1003 N LYS 288 18.878 10.015 24.992 1.00 20.72
ATOM 1004 CA LYS 288 19.156 9.611 26.365 1.00 20.72
ATOM 1005 CB LYS 288 20.626 9.213 26.514 1.00 43.14
ATOM 1006 CG LYS 288 20.991 8.721 27.903 1.00 43.14
ATOM 1007 CD LYS 288 22.374 8.102 27.931 1.00 43.14
ATOM 1008 CE LYS 288 22.615 7.379 29.250 1.00 43.14
ATOM 1009 NZ LYS 288 23.866 6.568 29.224 1.00 43.14
ATOM 1010 C LYS 288 18.819 10.742 27.331 1.00 20.72
ATOM 1011 O LYS 288 18.027 10.566 28.261 1.00 43.14
ATOM 1012 N ASN 289 19.380 11.917 27.067 1.00 33.64
ATOM 1013 CA ASN 289 19.156 13.090 27.906 1.00 33.64
ATOM 1014 CB ASN 289 20.190 14.173 27.590 1.00 35.61
ATOM 1015 CG ASN 289 21.607 13.730 27.898 1.00 35.61
ATOM 1016 OD1 ASN 289 21.835 12.920 28.797 1.00 35.61
ATOM 1017 ND2 ASN 289 22.566 14.253 27.149 1.00 35.61
ATOM 1018 C ASN 289 17.747 13.654 27.757 1.00 33.64
ATOM 1019 O ASN 289 17.276 14.399 28.616 1.00 35.61
ATOM 1020 N GLY 290 17.072 13.287 26.672 1.00 22.05
ATOM 1021 CA GLY 290 15.722 13.767 26.435 1.00 22.05
ATOM 1022 C GLY 290 14.688 13.247 27.416 1.00 22.05
ATOM 1023 O GLY 290 13.550 13.710 27.420 1.00 29.95
ATOM 1024 N GLY 291 15.072 12.276 28.239 1.00 24.91
ATOM 1025 CA GLY 291 14.142 11.732 29.211 1.00 24.91
ATOM 1026 C GLY 291 14.093 10.217 29.248 1.00 24.91
ATOM 1027 O GLY 291 13.536 9.640 30.179 1.00 29.39
ATOM 1028 N LEU 292 14.676 9.567 28.246 1.00 30.21
ATOM 1029 CA LEU 292 14.675 8.110 28.189 1.00 30.21
ATOM 1030 CB LEU 292 14.732 7.626 26.734 1.00 21.45
ATOM 1031 CG LEU 292 13.439 7.795 25.928 1.00 21.45
ATOM 1032 CD1 LEU 292 13.612 7.225 24.542 1.00 21.45
ATOM 1033 CD2 LEU 292 12.296 7.087 26.630 1.00 21.45
ATOM 1034 C LEU 292 15.785 7.461 29.013 1.00 30.21
ATOM 1035 O LEU 292 15.645 6.324 29.473 1.00 21.45
ATOM 1036 N GLY 293 16.885 8.180 29.205 1.00 16.29

ATOM 1037 CA GLY 293 17.992 7.638 29.970 1.00 16.29
ATOM 1038 C GLY 293 18.534 6.374 29.332 1.00 16.29
ATOM 1039 O GLY 293 18.763 6.334 28.122 1.00 25.88
ATOM 1040 N VAL 294 18.689 5.322 30.130 1.00 33.05
ATOM 1041 CA VAL 294 19.211 4.050 29.635 1.00 33.05
ATOM 1042 CB VAL 294 19.530 3.069 30.788 1.00 30.11
ATOM 1043 CG1 VAL 294 20.718 3.577 31.582 1.00 30.11
ATOM 1044 CG2 VAL 294 18.315 2.887 31.697 1.00 30.11
ATOM 1045 C VAL 294 18.302 3.361 28.617 1.00 33.05
ATOM 1046 O VAL 294 18.768 2.545 27.817 1.00 30.11
ATOM 1047 N VAL 295 17.014 3.699 28.635 1.00 18.14
ATOM 1048 CA VAL 295 16.056 3.118 27.698 1.00 18.14
ATOM 1049 CB VAL 295 14.638 3.698 27.902 1.00 28.34
ATOM 1050 CG1 VAL 295 13.668 3.099 26.893 1.00 28.34
ATOM 1051 CG2 VAL 295 14.159 3.431 29.317 1.00 28.34
ATOM 1052 C VAL 295 16.521 3.415 26.275 1.00 18.14
ATOM 1053 O VAL 295 16.395 2.577 25.383 1.00 28.34
ATOM 1054 N SER 296 17.091 4.601 26.085 1.00 20.84
ATOM 1055 CA SER 296 17.596 5.028 24.785 1.00 20.84
ATOM 1056 CB SER 296 18.160 6.446 24.884 1.00 25.61
ATOM 1057 OG SER 296 18.615 6.911 23.627 1.00 25.61
ATOM 1058 C SER 296 18.687 4.074 24.307 1.00 20.84
ATOM 1059 O SER 296 18.723 3.691 23.133 1.00 25.61
ATOM 1060 N ASP 297 19.571 3.691 25.224 1.00 28.08
ATOM 1061 CA ASP 297 20.660 2.777 24.904 1.00 28.08
ATOM 1062 CB ASP 297 21.555 2.552 26.129 1.00 51.15
ATOM 1063 CG ASP 297 22.207 3.835 26.629 1.00 51.15
ATOM 1064 OD1 ASP 297 22.508 4.725 25.804 1.00 51.15
ATOM 1065 OD2 ASP 297 22.425 3.948 27.855 1.00 51.15
ATOM 1066 C ASP 297 20.079 1.450 24.434 1.00 28.08
ATOM 1067 O ASP 297 20.549 0.869 23.456 1.00 51.15
ATOM 1068 N ALA 298 19.024 1.006 25.111 1.00 26.12
ATOM 1069 CA ALA 298 18.357 -0.245 24.778 1.00 26.12
ATOM 1070 CB ALA 298 17.253 -0.530 25.787 1.00 18.80
ATOM 1071 C ALA 298 17.790 -0.223 23.356 1.00 26.12
ATOM 1072 O ALA 298 18.014 -1.154 22.575 1.00 18.80
ATOM 1073 N ILE 299 17.078 0.848 23.013 1.00 17.42
ATOM 1074 CA ILE 299 16.483 0.979 21.686 1.00 17.42
ATOM 1075 CB ILE 299 15.559 2.211 21.597 1.00 16.69
ATOM 1076 CG2 ILE 299 14.845 2.238 20.253 1.00 16.69
ATOM 1077 CG1 ILE 299 14.515 2.149 22.712 1.00 16.69
ATOM 1078 CD1 ILE 299 13.713 3.406 22.872 1.00 16.69
ATOM 1079 C ILE 299 17.563 1.042 20.609 1.00 17.42
ATOM 1080 O ILE 299 17.416 0.443 19.542 1.00 16.69
ATOM 1081 N PHE 300 18.652 1.752 20.889 1.00 14.46
ATOM 1082 CA PHE 300 19.751 1.851 19.935 1.00 14.46
ATOM 1083 CB PHE 300 20.804 2.854 20.409 1.00 24.01

ATOM 1084 CG PHE 300 20.656 4.221 19.801 1.00 24.01
ATOM 1085 CD1 PHE 300 19.904 5.204 20.435 1.00 24.01
ATOM 1086 CD2 PHE 300 21.271 4.526 18.591 1.00 24.01
ATOM 1087 CE1 PHE 300 19.766 6.472 19.873 1.00 24.01
ATOM 1088 CE2 PHE 300 21.140 5.791 18.020 1.00 24.01
ATOM 1089 CZ PHE 300 20.385 6.765 18.663 1.00 24.01
ATOM 1090 C PHE 300 20.383 0.480 19.726 1.00 14.46
ATOM 1091 O PHE 300 20.696 0.102 18.596 1.00 24.01
ATOM 1092 N GLU 301 20.547 -0.270 20.813 1.00 21.61
ATOM 1093 CA GLU 301 21.123 -1.609 20.744 1.00 21.61
ATOM 1094 CB GLU 301 21.289 -2.192 22.143 1.00 23.89
ATOM 1095 C GLU 301 20.211 -2.498 19.904 1.00 21.61
ATOM 1096 O GLU 301 20.681 -3.251 19.043 1.00 23.89
ATOM 1097 N LEU 302 18.906 -2.390 20.140 1.00 14.43
ATOM 1098 CA LEU 302 17.922 -3.168 19.399 1.00 14.43
ATOM 1099 CB LEU 302 16.512 -2.872 19.912 1.00 23.43
ATOM 1100 CG LEU 302 15.350 -3.669 19.312 1.00 23.43
ATOM 1101 CD1 LEU 302 15.459 -5.140 19.688 1.00 23.43
ATOM 1102 CD2 LEU 302 14.035 -3.094 19.804 1.00 23.43
ATOM 1103 C LEU 302 18.027 -2.812 17.917 1.00 14.43
ATOM 1104 O LEU 302 18.089 -3.697 17.066 1.00 23.43
ATOM 1105 N GLY 303 18.098 -1.515 17.625 1.00 15.17
ATOM 1106 CA GLY 303 18.208 -1.056 16.251 1.00 15.17
ATOM 1107 C GLY 303 19.411 -1.640 15.530 1.00 15.17
ATOM 1108 O GLY 303 19.290 -2.137 14.406 1.00 27.67
ATOM 1109 N LYS 304 20.570 -1.594 16.182 1.00 19.04
ATOM 1110 CA LYS 304 21.802 -2.127 15.605 1.00 19.04
ATOM 1111 CB LYS 304 22.979 -1.975 16.577 1.00 56.94
ATOM 1112 CG LYS 304 23.496 -0.556 16.741 1.00 56.94
ATOM 1113 CD LYS 304 24.811 -0.524 17.516 1.00 56.94
ATOM 1114 CE LYS 304 24.634 -0.965 18.968 1.00 56.94
ATOM 1115 NZ LYS 304 23.838 0.008 19.778 1.00 56.94
ATOM 1116 C LYS 304 21.653 -3.596 15.229 1.00 19.04
ATOM 1117 O LYS 304 21.974 -3.993 14.107 1.00 56.94
ATOM 1118 N SER 305 21.146 -4.394 16.164 1.00 24.46
ATOM 1119 CA SER 305 20.965 -5.822 15.932 1.00 24.46
ATOM 1120 CB SER 305 20.610 -6.533 17.240 1.00 37.46
ATOM 1121 OG SER 305 19.444 -5.984 17.827 1.00 37.46
ATOM 1122 C SER 305 19.926 -6.128 14.853 1.00 24.46
ATOM 1123 O SER 305 20.146 -6.996 14.006 1.00 37.46
ATOM 1124 N LEU 306 18.819 -5.390 14.858 1.00 25.47
ATOM 1125 CA LEU 306 17.753 -5.592 13.881 1.00 25.47
ATOM 1126 CB LEU 306 16.525 -4.746 14.224 1.00 15.99
ATOM 1127 CG LEU 306 15.700 -5.190 15.432 1.00 15.99
ATOM 1128 CD1 LEU 306 14.504 -4.271 15.600 1.00 15.99
ATOM 1129 CD2 LEU 306 15.244 -6.624 15.247 1.00 15.99
ATOM 1130 C LEU 306 18.174 -5.330 12.439 1.00 25.47

```
ATOM  1131  O   LEU  306      17.596  -5.902  11.513  1.00 15.99
ATOM  1132  N   SER  307      19.182  -4.482  12.247  1.00 24.28
ATOM  1133  CA  SER  307      19.670  -4.160  10.907  1.00 24.28
ATOM  1134  CB  SER  307      20.910  -3.263  10.989  1.00 40.92
ATOM  1135  OG  SER  307      20.617  -2.028  11.622  1.00 40.92
ATOM  1136  C   SER  307      19.995  -5.422  10.107  1.00 24.28
ATOM  1137  O   SER  307      19.625  -5.535   8.936  1.00 40.92
ATOM  1138  N   ALA  308      20.644  -6.383  10.761  1.00 30.97
ATOM  1139  CA  ALA  308      21.027  -7.640  10.124  1.00 30.97
ATOM  1140  CB  ALA  308      22.004  -8.399  11.013  1.00 37.84
ATOM  1141  C   ALA  308      19.830  -8.528   9.779  1.00 30.97
ATOM  1142  O   ALA  308      19.897  -9.336   8.853  1.00 37.84
ATOM  1143  N   PHE  309      18.737  -8.372  10.520  1.00 22.78
ATOM  1144  CA  PHE  309      17.533  -9.166  10.292  1.00 22.78
ATOM  1145  CB  PHE  309      16.571  -9.037  11.477  1.00 30.14
ATOM  1146  CG  PHE  309      17.032  -9.751  12.716  1.00 30.14
ATOM  1147  CD1 PHE  309      16.299 -10.809  13.236  1.00 30.14
ATOM  1148  CD2 PHE  309      18.204  -9.372  13.359  1.00 30.14
ATOM  1149  CE1 PHE  309      16.725 -11.481  14.378  1.00 30.14
ATOM  1150  CE2 PHE  309      18.640 -10.038  14.503  1.00 30.14
ATOM  1151  CZ  PHE  309      17.896 -11.094  15.013  1.00 30.14
ATOM  1152  C   PHE  309      16.818  -8.813   8.990  1.00 22.78
ATOM  1153  O   PHE  309      16.068  -9.631   8.451  1.00 30.14
ATOM  1154  N   ASN  310      17.051  -7.598   8.496  1.00 35.30
ATOM  1155  CA  ASN  310      16.441  -7.109   7.255  1.00 35.30
ATOM  1156  CB  ASN  310      17.109  -7.760   6.037  1.00 28.28
ATOM  1157  C   ASN  310      14.929  -7.339   7.229  1.00 35.30
ATOM  1158  O   ASN  310      14.395  -7.970   6.312  1.00 28.28
ATOM  1159  N   LEU  311      14.249  -6.831   8.251  1.00 27.52
ATOM  1160  CA  LEU  311      12.803  -6.979   8.369  1.00 27.52
ATOM  1161  CB  LEU  311      12.351  -6.630   9.788  1.00 22.62
ATOM  1162  CG  LEU  311      12.950  -7.396  10.968  1.00 22.62
ATOM  1163  CD1 LEU  311      12.360  -6.864  12.268  1.00 22.62
ATOM  1164  CD2 LEU  311      12.672  -8.881  10.821  1.00 22.62
ATOM  1165  C   LEU  311      12.060  -6.085   7.382  1.00 27.52
ATOM  1166  O   LEU  311      12.519  -4.986   7.067  1.00 22.62
ATOM  1167  N   ASP  312      10.918  -6.563   6.892  1.00 16.74
ATOM  1168  CA  ASP  312      10.095  -5.789   5.968  1.00 16.74
ATOM  1169  CB  ASP  312       9.803  -6.578   4.673  1.00 16.35
ATOM  1170  CG  ASP  312       8.924  -7.814   4.888  1.00 16.35
ATOM  1171  OD1 ASP  312       8.591  -8.168   6.037  1.00 16.35
ATOM  1172  OD2 ASP  312       8.559  -8.446   3.876  1.00 16.35
ATOM  1173  C   ASP  312       8.808  -5.354   6.678  1.00 16.74
ATOM  1174  O   ASP  312       8.535  -5.798   7.797  1.00 16.35
ATOM  1175  N   ASP  313       8.007  -4.520   6.019  1.00  5.43
ATOM  1176  CA  ASP  313       6.758  -4.016   6.592  1.00  5.43
ATOM  1177  CB  ASP  313       5.974  -3.201   5.559  1.00 31.80
```

ATOM 1178 CG ASP 313 6.670 -1.906 5.183 1.00 31.80
ATOM 1179 OD1 ASP 313 7.392 -1.340 6.033 1.00 31.80
ATOM 1180 OD2 ASP 313 6.493 -1.452 4.032 1.00 31.80
ATOM 1181 C ASP 313 5.849 -5.081 7.189 1.00 5.43
ATOM 1182 O ASP 313 5.216 -4.849 8.221 1.00 31.80
ATOM 1183 N THR 314 5.777 -6.238 6.543 1.00 12.98
ATOM 1184 CA THR 314 4.934 -7.327 7.022 1.00 12.98
ATOM 1185 CB THR 314 4.825 -8.441 5.968 1.00 18.90
ATOM 1186 OG1 THR 314 4.249 -7.904 4.769 1.00 18.90
ATOM 1187 CG2 THR 314 3.960 -9.578 6.477 1.00 18.90
ATOM 1188 C THR 314 5.426 -7.910 8.349 1.00 12.98
ATOM 1189 O THR 314 4.636 -8.124 9.268 1.00 18.90
ATOM 1190 N GLU 315 6.731 -8.135 8.457 1.00 9.13
ATOM 1191 CA GLU 315 7.316 -8.685 9.675 1.00 9.13
ATOM 1192 CB GLU 315 8.771 -9.078 9.427 1.00 11.49
ATOM 1193 CG GLU 315 8.870 -10.323 8.562 1.00 11.49
ATOM 1194 CD GLU 315 10.233 -10.544 7.945 1.00 11.49
ATOM 1195 OE1 GLU 315 10.964 -9.561 7.705 1.00 11.49
ATOM 1196 OE2 GLU 315 10.558 -11.715 7.669 1.00 11.49
ATOM 1197 C GLU 315 7.180 -7.720 10.847 1.00 9.13
ATOM 1198 O GLU 315 6.863 -8.131 11.967 1.00 11.49
ATOM 1199 N VAL 316 7.376 -6.433 10.575 1.00 9.46
ATOM 1200 CA VAL 316 7.240 -5.406 11.602 1.00 9.46
ATOM 1201 CB VAL 316 7.655 -4.015 11.063 1.00 7.95
ATOM 1202 CG1 VAL 316 7.434 -2.941 12.124 1.00 7.95
ATOM 1203 CG2 VAL 316 9.112 -4.037 10.625 1.00 7.95
ATOM 1204 C VAL 316 5.777 -5.365 12.051 1.00 9.46
ATOM 1205 O VAL 316 5.484 -5.300 13.247 1.00 7.95
ATOM 1206 N ALA 317 4.866 -5.438 11.083 1.00 5.52
ATOM 1207 CA ALA 317 3.434 -5.417 11.355 1.00 5.52
ATOM 1208 CB ALA 317 2.656 -5.415 10.054 1.00 10.98
ATOM 1209 C ALA 317 3.002 -6.595 12.225 1.00 5.52
ATOM 1210 O ALA 317 2.317 -6.412 13.230 1.00 10.98
ATOM 1211 N LEU 318 3.411 -7.799 11.838 1.00 8.62
ATOM 1212 CA LEU 318 3.067 -9.003 12.584 1.00 8.62
ATOM 1213 CB LEU 318 3.523 -10.249 11.825 1.00 10.49
ATOM 1214 CG LEU 318 2.770 -10.494 10.514 1.00 10.49
ATOM 1215 CD1 LEU 318 3.376 -11.664 9.769 1.00 10.49
ATOM 1216 CD2 LEU 318 1.297 -10.741 10.799 1.00 10.49
ATOM 1217 C LEU 318 3.674 -8.971 13.978 1.00 8.62
ATOM 1218 O LEU 318 3.047 -9.407 14.945 1.00 10.49
ATOM 1219 N LEU 319 4.885 -8.435 14.082 1.00 9.43
ATOM 1220 CA LEU 319 5.560 -8.325 15.366 1.00 9.43
ATOM 1221 CB LEU 319 6.975 -7.773 15.173 1.00 24.05
ATOM 1222 CG LEU 319 7.901 -7.680 16.389 1.00 24.05
ATOM 1223 CD1 LEU 319 7.889 -8.977 17.182 1.00 24.05
ATOM 1224 CD2 LEU 319 9.310 -7.356 15.922 1.00 24.05

```
ATOM   1225  C   LEU   319      4.731  -7.404  16.259  1.00  9.43
ATOM   1226  O   LEU   319      4.456  -7.731  17.416  1.00 24.05
ATOM   1227  N   GLN   320      4.287  -6.282  15.699  1.00  8.67
ATOM   1228  CA  GLN   320      3.467  -5.325  16.437  1.00  8.67
ATOM   1229  CB  GLN   320      3.151  -4.102  15.573  1.00 10.94
ATOM   1230  CG  GLN   320      4.361  -3.256  15.218  1.00 10.94
ATOM   1231  CD  GLN   320      4.025  -2.045  14.359  1.00 10.94
ATOM   1232  OE1 GLN   320      4.889  -1.217  14.082  1.00 10.94
ATOM   1233  NE2 GLN   320      2.773  -1.940  13.924  1.00 10.94
ATOM   1234  C   GLN   320      2.169  -5.984  16.895  1.00  8.67
ATOM   1235  O   GLN   320      1.708  -5.751  18.013  1.00 10.94
ATOM   1236  N   ALA   321      1.586  -6.806  16.028  1.00  9.21
ATOM   1237  CA  ALA   321      0.349  -7.513  16.342  1.00  9.21
ATOM   1238  CB  ALA   321     -0.136  -8.283  15.129  1.00 12.83
ATOM   1239  C   ALA   321      0.558  -8.460  17.523  1.00  9.21
ATOM   1240  O   ALA   321     -0.315  -8.591  18.382  1.00 12.83
ATOM   1241  N   VAL   322      1.718  -9.111  17.566  1.00  9.10
ATOM   1242  CA  VAL   322      2.043 -10.030  18.651  1.00  9.10
ATOM   1243  CB  VAL   322      3.340 -10.827  18.352  1.00 15.92
ATOM   1244  CG1 VAL   322      3.783 -11.614  19.575  1.00 15.92
ATOM   1245  CG2 VAL   322      3.106 -11.780  17.194  1.00 15.92
ATOM   1246  C   VAL   322      2.192  -9.256  19.960  1.00  9.10
ATOM   1247  O   VAL   322      1.707  -9.691  21.003  1.00 15.92
ATOM   1248  N   LEU   323      2.856  -8.106  19.893  1.00 11.07
ATOM   1249  CA  LEU   323      3.062  -7.257  21.064  1.00 11.07
ATOM   1250  CB  LEU   323      3.959  -6.070  20.705  1.00 16.31
ATOM   1251  CG  LEU   323      5.377  -6.393  20.229  1.00 16.31
ATOM   1252  CD1 LEU   323      6.039  -5.149  19.669  1.00 16.31
ATOM   1253  CD2 LEU   323      6.187  -6.966  21.375  1.00 16.31
ATOM   1254  C   LEU   323      1.729  -6.742  21.595  1.00 11.07
ATOM   1255  O   LEU   323      1.523  -6.650  22.803  1.00 16.31
ATOM   1256  N   LEU   324      0.827  -6.413  20.677  1.00 13.48
ATOM   1257  CA  LEU   324     -0.494  -5.900  21.015  1.00 13.48
ATOM   1258  CB  LEU   324     -1.185  -5.383  19.752  1.00 15.92
ATOM   1259  CG  LEU   324     -2.607  -4.837  19.889  1.00 15.92
ATOM   1260  CD1 LEU   324     -2.602  -3.547  20.692  1.00 15.92
ATOM   1261  CD2 LEU   324     -3.182  -4.598  18.511  1.00 15.92
ATOM   1262  C   LEU   324     -1.393  -6.924  21.707  1.00 13.48
ATOM   1263  O   LEU   324     -1.896  -6.678  22.802  1.00 15.92
ATOM   1264  N   MET   325     -1.593  -8.074  21.072  1.00 11.47
ATOM   1265  CA  MET   325     -2.458  -9.111  21.631  1.00 11.47
ATOM   1266  CB  MET   325     -2.959 -10.043  20.520  1.00 22.90
ATOM   1267  CG  MET   325     -3.689  -9.347  19.375  1.00 22.90
ATOM   1268  SD  MET   325     -5.052  -8.287  19.908  1.00 22.90
ATOM   1269  CE  MET   325     -6.284  -9.475  20.353  1.00 22.90
ATOM   1270  C   MET   325     -1.814  -9.932  22.752  1.00 11.47
ATOM   1271  O   MET   325     -1.899 -11.160  22.758  1.00 22.90
```

ATOM 1272 N SER 326 -1.193 -9.256 23.711 1.00 30.07
ATOM 1273 CA SER 326 -0.543 -9.936 24.826 1.00 30.07
ATOM 1274 CB SER 326 0.723 -9.175 25.239 1.00 32.79
ATOM 1275 OG SER 326 1.283 -9.699 26.433 1.00 32.79
ATOM 1276 C SER 326 -1.492 -10.061 26.014 1.00 30.07
ATOM 1277 O SER 326 -2.343 -9.198 26.235 1.00 32.79
ATOM 1278 N THR 327 -1.347 -11.143 26.773 1.00 29.08
ATOM 1279 CA THR 327 -2.179 -11.368 27.948 1.00 29.08
ATOM 1280 CB THR 327 -2.705 -12.817 27.998 1.00 36.96
ATOM 1281 OG1 THR 327 -1.612 -13.734 27.856 1.00 36.96
ATOM 1282 CG2 THR 327 -3.716 -13.055 26.890 1.00 36.96
ATOM 1283 C THR 327 -1.426 -11.049 29.239 1.00 29.08
ATOM 1284 O THR 327 -1.930 -11.295 30.333 1.00 36.96
ATOM 1285 N ASP 328 -0.214 -10.513 29.111 1.00 38.93
ATOM 1286 CA ASP 328 0.596 -10.152 30.273 1.00 38.93
ATOM 1287 CB ASP 328 2.082 -10.089 29.899 1.00 85.70
ATOM 1288 CG ASP 328 2.660 -11.451 29.556 1.00 85.70
ATOM 1289 OD1 ASP 328 3.388 -11.554 28.542 1.00 85.70
ATOM 1290 OD2 ASP 328 2.393 -12.418 30.303 1.00 85.70
ATOM 1291 C ASP 328 0.148 -8.810 30.845 1.00 38.93
ATOM 1292 O ASP 328 0.962 -7.911 31.061 1.00 85.70
ATOM 1293 N ARG 329 -1.154 -8.673 31.070 1.00 28.95
ATOM 1294 CA ARG 329 -1.716 -7.445 31.608 1.00 28.95
ATOM 1295 CB ARG 329 -2.390 -6.612 30.509 1.00 38.88
ATOM 1296 CG ARG 329 -1.449 -5.887 29.554 1.00 38.88
ATOM 1297 CD ARG 329 -1.107 -6.739 28.347 1.00 38.88
ATOM 1298 NE ARG 329 -0.322 -6.005 27.356 1.00 38.88
ATOM 1299 CZ ARG 329 1.006 -5.936 27.351 1.00 38.88
ATOM 1300 NH1 ARG 329 1.713 -6.552 28.290 1.00 38.88
ATOM 1301 NH2 ARG 329 1.631 -5.270 26.391 1.00 38.88
ATOM 1302 C ARG 329 -2.745 -7.790 32.672 1.00 28.95
ATOM 1303 O ARG 329 -3.279 -8.898 32.696 1.00 38.88
ATOM 1304 N SER 330 -3.029 -6.829 33.542 1.00 42.07
ATOM 1305 CA SER 330 -3.999 -7.025 34.607 1.00 42.07
ATOM 1306 CB SER 330 -3.488 -6.399 35.899 1.00 37.35
ATOM 1307 C SER 330 -5.340 -6.413 34.220 1.00 42.07
ATOM 1308 O SER 330 -5.386 -5.382 33.550 1.00 37.35
ATOM 1309 N GLY 331 -6.424 -7.085 34.598 1.00 26.57
ATOM 1310 CA GLY 331 -7.754 -6.572 34.318 1.00 26.57
ATOM 1311 C GLY 331 -8.404 -6.915 32.991 1.00 26.57
ATOM 1312 O GLY 331 -9.462 -6.371 32.671 1.00 30.06
ATOM 1313 N LEU 332 -7.797 -7.807 32.214 1.00 31.47
ATOM 1314 CA LEU 332 -8.374 -8.189 30.928 1.00 31.47
ATOM 1315 CB LEU 332 -7.351 -8.933 30.065 1.00 23.83
ATOM 1316 CG LEU 332 -6.261 -8.076 29.425 1.00 23.83
ATOM 1317 CD1 LEU 332 -5.296 -8.960 28.652 1.00 23.83
ATOM 1318 CD2 LEU 332 -6.897 -7.041 28.509 1.00 23.83

```
ATOM  1319  C   LEU  332     -9.630  -9.039  31.091  1.00 31.47
ATOM  1320  O   LEU  332     -9.665  -9.969  31.895  1.00 23.83
ATOM  1321  N   LEU  333    -10.659  -8.702  30.321  1.00 27.66
ATOM  1322  CA  LEU  333    -11.927  -9.422  30.351  1.00 27.66
ATOM  1323  CB  LEU  333    -13.072  -8.500  29.918  1.00 49.79
ATOM  1324  CG  LEU  333    -13.416  -7.312  30.820  1.00 49.79
ATOM  1325  CD1 LEU  333    -14.328  -6.339  30.083  1.00 49.79
ATOM  1326  CD2 LEU  333    -14.072  -7.803  32.104  1.00 49.79
ATOM  1327  C   LEU  333    -11.904 -10.663  29.456  1.00 27.66
ATOM  1328  O   LEU  333    -12.117 -11.780  29.919  1.00 49.79
ATOM  1329  N   CYS  334    -11.616 -10.464  28.174  1.00 29.56
ATOM  1330  CA  CYS  334    -11.583 -11.566  27.220  1.00 29.56
ATOM  1331  CB  CYS  334    -12.134 -11.106  25.865  1.00 47.01
ATOM  1332  SG  CYS  334    -13.888 -10.657  25.883  1.00 47.01
ATOM  1333  C   CYS  334    -10.187 -12.161  27.050  1.00 29.56
ATOM  1334  O   CYS  334     -9.652 -12.202  25.942  1.00 47.01
ATOM  1335  N   VAL  335     -9.617 -12.655  28.147  1.00 30.69
ATOM  1336  CA  VAL  335     -8.280 -13.250  28.132  1.00 30.69
ATOM  1337  CB  VAL  335     -7.913 -13.844  29.514  1.00 32.18
ATOM  1338  CG1 VAL  335     -6.517 -14.456  29.480  1.00 32.18
ATOM  1339  CG2 VAL  335     -7.988 -12.768  30.584  1.00 32.18
ATOM  1340  C   VAL  335     -8.120 -14.340  27.068  1.00 30.69
ATOM  1341  O   VAL  335     -7.149 -14.337  26.309  1.00 32.18
ATOM  1342  N   ASP  336     -9.079 -15.260  27.012  1.00 30.13
ATOM  1343  CA  ASP  336     -9.040 -16.360  26.052  1.00 30.13
ATOM  1344  CB  ASP  336    -10.218 -17.311  26.284  1.00 63.22
ATOM  1345  CG  ASP  336    -10.178 -18.528  25.370  1.00 63.22
ATOM  1346  OD1 ASP  336    -11.119 -18.700  24.565  1.00 63.22
ATOM  1347  OD2 ASP  336     -9.205 -19.311  25.452  1.00 63.22
ATOM  1348  C   ASP  336     -9.012 -15.903  24.594  1.00 30.13
ATOM  1349  O   ASP  336     -8.156 -16.339  23.823  1.00 63.22
ATOM  1350  N   LYS  337     -9.944 -15.027  24.223  1.00 26.63
ATOM  1351  CA  LYS  337    -10.024 -14.515  22.856  1.00 26.63
ATOM  1352  CB  LYS  337    -11.172 -13.516  22.729  1.00 21.38
ATOM  1353  C   LYS  337     -8.706 -13.865  22.438  1.00 26.63
ATOM  1354  O   LYS  337     -8.204 -14.110  21.338  1.00 21.38
ATOM  1355  N   ILE  338     -8.141 -13.060  23.334  1.00 24.65
ATOM  1356  CA  ILE  338     -6.879 -12.376  23.078  1.00 24.65
ATOM  1357  CB  ILE  338     -6.543 -11.380  24.215  1.00 20.45
ATOM  1358  CG2 ILE  338     -5.198 -10.719  23.966  1.00 20.45
ATOM  1359  CG1 ILE  338     -7.632 -10.308  24.308  1.00 20.45
ATOM  1360  CD1 ILE  338     -7.479  -9.374  25.486  1.00 20.45
ATOM  1361  C   ILE  338     -5.744 -13.388  22.911  1.00 24.65
ATOM  1362  O   ILE  338     -4.948 -13.288  21.974  1.00 20.45
ATOM  1363  N   GLU  339     -5.700 -14.383  23.795  1.00 35.34
ATOM  1364  CA  GLU  339     -4.673 -15.422  23.745  1.00 35.34
ATOM  1365  CB  GLU  339     -4.836 -16.388  24.916  1.00 29.51
```

ATOM 1366 C GLU 339 -4.744 -16.180 22.421 1.00 35.34
ATOM 1367 O GLU 339 -3.720 -16.421 21.777 1.00 29.51
ATOM 1368 N LYS 340 -5.959 -16.536 22.009 1.00 24.19
ATOM 1369 CA LYS 340 -6.168 -17.256 20.755 1.00 24.19
ATOM 1370 CB LYS 340 -7.627 -17.671 20.624 1.00 23.97
ATOM 1371 C LYS 340 -5.754 -16.377 19.576 1.00 24.19
ATOM 1372 O LYS 340 -5.197 -16.860 18.586 1.00 23.97
ATOM 1373 N SER 341 -6.000 -15.079 19.708 1.00 16.85
ATOM 1374 CA SER 341 -5.651 -14.115 18.676 1.00 16.85
ATOM 1375 CB SER 341 -6.223 -12.744 19.033 1.00 26.59
ATOM 1376 OG SER 341 -5.852 -11.765 18.080 1.00 26.59
ATOM 1377 C SER 341 -4.137 -14.026 18.500 1.00 16.85
ATOM 1378 O SER 341 -3.638 -14.042 17.374 1.00 26.59
ATOM 1379 N GLN 342 -3.406 -13.932 19.608 1.00 17.35
ATOM 1380 CA GLN 342 -1.952 -13.845 19.537 1.00 17.35
ATOM 1381 CB GLN 342 -1.337 -13.597 20.913 1.00 30.07
ATOM 1382 CG GLN 342 0.140 -13.245 20.832 1.00 30.07
ATOM 1383 CD GLN 342 0.811 -13.196 22.182 1.00 30.07
ATOM 1384 OE1 GLN 342 0.884 -14.201 22.884 1.00 30.07
ATOM 1385 NE2 GLN 342 1.318 -12.030 22.548 1.00 30.07
ATOM 1386 C GLN 342 -1.368 -15.118 18.944 1.00 17.35
ATOM 1387 O GLN 342 -0.405 -15.066 18.178 1.00 30.07
ATOM 1388 N GLU 343 -1.949 -16.260 19.303 1.00 18.35
ATOM 1389 CA GLU 343 -1.489 -17.546 18.791 1.00 18.35
ATOM 1390 CB GLU 343 -2.308 -18.676 19.394 1.00 16.98
ATOM 1391 C GLU 343 -1.603 -17.560 17.267 1.00 18.35
ATOM 1392 O GLU 343 -0.699 -18.026 16.568 1.00 16.98
ATOM 1393 N ALA 344 -2.706 -17.017 16.761 1.00 14.83
ATOM 1394 CA ALA 344 -2.946 -16.948 15.324 1.00 14.83
ATOM 1395 CB ALA 344 -4.327 -16.376 15.049 1.00 19.42
ATOM 1396 C ALA 344 -1.872 -16.102 14.640 1.00 14.83
ATOM 1397 O ALA 344 -1.311 -16.507 13.619 1.00 19.42
ATOM 1398 N TYR 345 -1.586 -14.934 15.211 1.00 13.10
ATOM 1399 CA TYR 345 -0.569 -14.041 14.665 1.00 13.10
ATOM 1400 CB TYR 345 -0.573 -12.697 15.393 1.00 2.00
ATOM 1401 CG TYR 345 -1.670 -11.767 14.938 1.00 2.00
ATOM 1402 CD1 TYR 345 -2.707 -11.409 15.794 1.00 2.00
ATOM 1403 CE1 TYR 345 -3.722 -10.562 15.377 1.00 2.00
ATOM 1404 CD2 TYR 345 -1.674 -11.248 13.647 1.00 2.00
ATOM 1405 CE2 TYR 345 -2.683 -10.398 13.219 1.00 2.00
ATOM 1406 CZ TYR 345 -3.706 -10.061 14.087 1.00 2.00
ATOM 1407 OH TYR 345 -4.722 -9.233 13.669 1.00 2.00
ATOM 1408 C TYR 345 0.818 -14.666 14.732 1.00 13.10
ATOM 1409 O TYR 345 1.614 -14.504 13.811 1.00 2.00
ATOM 1410 N LEU 346 1.101 -15.387 15.813 1.00 12.59
ATOM 1411 CA LEU 346 2.396 -16.041 15.976 1.00 12.59
ATOM 1412 CB LEU 346 2.498 -16.715 17.347 1.00 22.61

ATOM 1413 CG LEU 346 2.899 -15.799 18.504 1.00 22.61
ATOM 1414 CD1 LEU 346 2.717 -16.511 19.830 1.00 22.61
ATOM 1415 CD2 LEU 346 4.341 -15.357 18.324 1.00 22.61
ATOM 1416 C LEU 346 2.629 -17.057 14.865 1.00 12.59
ATOM 1417 O LEU 346 3.706 -17.099 14.272 1.00 22.61
ATOM 1418 N LEU 347 1.612 -17.862 14.574 1.00 18.42
ATOM 1419 CA LEU 347 1.706 -18.863 13.517 1.00 18.42
ATOM 1420 CB LEU 347 0.471 -19.762 13.512 1.00 23.56
ATOM 1421 CG LEU 347 0.509 -20.965 14.456 1.00 23.56
ATOM 1422 CD1 LEU 347 -0.819 -21.702 14.398 1.00 23.56
ATOM 1423 CD2 LEU 347 1.659 -21.890 14.068 1.00 23.56
ATOM 1424 C LEU 347 1.870 -18.201 12.154 1.00 18.42
ATOM 1425 O LEU 347 2.672 -18.651 11.330 1.00 23.56
ATOM 1426 N ALA 348 1.099 -17.144 11.917 1.00 12.49
ATOM 1427 CA ALA 348 1.157 -16.403 10.663 1.00 12.49
ATOM 1428 CB ALA 348 0.098 -15.302 10.654 1.00 14.77
ATOM 1429 C ALA 348 2.545 -15.798 10.504 1.00 12.49
ATOM 1430 O ALA 348 3.154 -15.874 9.436 1.00 14.77
ATOM 1431 N PHE 349 3.048 -15.246 11.602 1.00 15.52
ATOM 1432 CA PHE 349 4.357 -14.613 11.664 1.00 15.52
ATOM 1433 CB PHE 349 4.566 -14.049 13.076 1.00 14.41
ATOM 1434 CG PHE 349 5.714 -13.085 13.203 1.00 14.41
ATOM 1435 CD1 PHE 349 6.473 -12.712 12.099 1.00 14.41
ATOM 1436 CD2 PHE 349 6.027 -12.540 14.443 1.00 14.41
ATOM 1437 CE1 PHE 349 7.523 -11.813 12.230 1.00 14.41
ATOM 1438 CE2 PHE 349 7.075 -11.640 14.584 1.00 14.41
ATOM 1439 CZ PHE 349 7.825 -11.275 13.475 1.00 14.41
ATOM 1440 C PHE 349 5.444 -15.633 11.324 1.00 15.52
ATOM 1441 O PHE 349 6.252 -15.413 10.422 1.00 14.41
ATOM 1442 N GLU 350 5.439 -16.760 12.026 1.00 13.20
ATOM 1443 CA GLU 350 6.424 -17.811 11.801 1.00 13.20
ATOM 1444 CB GLU 350 6.152 -18.995 12.734 1.00 33.43
ATOM 1445 CG GLU 350 7.068 -20.193 12.519 1.00 33.43
ATOM 1446 CD GLU 350 6.786 -21.331 13.482 1.00 33.43
ATOM 1447 OE1 GLU 350 7.746 -22.035 13.857 1.00 33.43
ATOM 1448 OE2 GLU 350 5.611 -21.525 13.865 1.00 33.43
ATOM 1449 C GLU 350 6.409 -18.283 10.352 1.00 13.20
ATOM 1450 O GLU 350 7.449 -18.355 9.694 1.00 33.43
ATOM 1451 N HIS 351 5.217 -18.573 9.850 1.00 19.10
ATOM 1452 CA HIS 351 5.062 -19.051 8.485 1.00 19.10
ATOM 1453 CB HIS 351 3.632 -19.536 8.256 1.00 18.97
ATOM 1454 CG HIS 351 3.249 -20.700 9.117 1.00 18.97
ATOM 1455 CD2 HIS 351 3.987 -21.474 9.948 1.00 18.97
ATOM 1456 ND1 HIS 351 1.960 -21.180 9.194 1.00 18.97
ATOM 1457 CE1 HIS 351 1.918 -22.195 10.039 1.00 18.97
ATOM 1458 NE2 HIS 351 3.134 -22.394 10.509 1.00 18.97
ATOM 1459 C HIS 351 5.477 -18.011 7.449 1.00 19.10

```
ATOM   1460  O   HIS   351      5.955 -18.366   6.371  1.00 18.97
ATOM   1461  N   TYR   352      5.304 -16.732   7.767  1.00  9.38
ATOM   1462  CA  TYR   352      5.711 -15.683   6.843  1.00  9.38
ATOM   1463  CB  TYR   352      5.168 -14.317   7.257  1.00 16.06
ATOM   1464  CG  TYR   352      5.539 -13.238   6.268  1.00 16.06
ATOM   1465  CD1 TYR   352      4.939 -13.190   5.008  1.00 16.06
ATOM   1466  CE1 TYR   352      5.321 -12.242   4.060  1.00 16.06
ATOM   1467  CD2 TYR   352      6.531 -12.303   6.562  1.00 16.06
ATOM   1468  CE2 TYR   352      6.923 -11.349   5.620  1.00 16.06
ATOM   1469  CZ  TYR   352      6.313 -11.326   4.371  1.00 16.06
ATOM   1470  OH  TYR   352      6.710 -10.401   3.431  1.00 16.06
ATOM   1471  C   TYR   352      7.234 -15.639   6.812  1.00  9.38
ATOM   1472  O   TYR   352      7.838 -15.475   5.751  1.00 16.06
ATOM   1473  N   VAL   353      7.851 -15.789   7.980  1.00 15.38
ATOM   1474  CA  VAL   353      9.305 -15.790   8.087  1.00 15.38
ATOM   1475  CB  VAL   353      9.761 -15.945   9.558  1.00 18.40
ATOM   1476  CG1 VAL   353     11.262 -16.163   9.633  1.00 18.40
ATOM   1477  CG2 VAL   353      9.384 -14.703  10.349  1.00 18.40
ATOM   1478  C   VAL   353      9.853 -16.938   7.237  1.00 15.38
ATOM   1479  O   VAL   353     10.850 -16.773   6.525  1.00 18.40
ATOM   1480  N   ASN   354      9.183 -18.086   7.298  1.00 14.74
ATOM   1481  CA  ASN   354      9.578 -19.259   6.521  1.00 14.74
ATOM   1482  CB  ASN   354      8.640 -20.435   6.799  1.00 19.97
ATOM   1483  CG  ASN   354      8.832 -21.020   8.180  1.00 19.97
ATOM   1484  OD1 ASN   354      9.879 -20.848   8.799  1.00 19.97
ATOM   1485  ND2 ASN   354      7.826 -21.734   8.664  1.00 19.97
ATOM   1486  C   ASN   354      9.550 -18.939   5.034  1.00 14.74
ATOM   1487  O   ASN   354     10.452 -19.319   4.290  1.00 19.97
ATOM   1488  N   HIS   355      8.507 -18.230   4.613  1.00 13.03
ATOM   1489  CA  HIS   355      8.329 -17.837   3.220  1.00 13.03
ATOM   1490  CB  HIS   355      6.960 -17.164   3.042  1.00 24.39
ATOM   1491  CG  HIS   355      6.753 -16.541   1.695  1.00 24.39
ATOM   1492  CD2 HIS   355      7.195 -15.370   1.176  1.00 24.39
ATOM   1493  ND1 HIS   355      6.009 -17.138   0.701  1.00 24.39
ATOM   1494  CE1 HIS   355      6.005 -16.368  -0.372  1.00 24.39
ATOM   1495  NE2 HIS   355      6.720 -15.289  -0.107  1.00 24.39
ATOM   1496  C   HIS   355      9.434 -16.894   2.758  1.00 13.03
ATOM   1497  O   HIS   355      9.834 -16.920   1.595  1.00 24.39
ATOM   1498  N   ARG   356      9.878 -16.027   3.660  1.00 19.55
ATOM   1499  CA  ARG   356     10.920 -15.054   3.358  1.00 19.55
ATOM   1500  CB  ARG   356     10.970 -14.001   4.460  1.00 22.01
ATOM   1501  CG  ARG   356      9.772 -13.081   4.454  1.00 22.01
ATOM   1502  CD  ARG   356     10.097 -11.784   3.750  1.00 22.01
ATOM   1503  NE  ARG   356     10.932 -10.934   4.592  1.00 22.01
ATOM   1504  CZ  ARG   356     11.822 -10.059   4.137  1.00 22.01
ATOM   1505  NH1 ARG   356     12.010  -9.907   2.833  1.00 22.01
ATOM   1506  NH2 ARG   356     12.519  -9.325   4.992  1.00 22.01
```

```
ATOM  1507  C   ARG  356      12.297 -15.675   3.158  1.00 19.55
ATOM  1508  O   ARG  356      13.127 -15.126   2.434  1.00 22.01
ATOM  1509  N   LYS  357      12.547 -16.788   3.841  1.00 23.18
ATOM  1510  CA  LYS  357      13.815 -17.504   3.739  1.00 23.18
ATOM  1511  CB  LYS  357      13.879 -18.273   2.415  1.00 42.91
ATOM  1512  CG  LYS  357      12.750 -19.277   2.274  1.00 42.91
ATOM  1513  CD  LYS  357      12.773 -20.021   0.960  1.00 42.91
ATOM  1514  CE  LYS  357      11.619 -21.011   0.913  1.00 42.91
ATOM  1515  NZ  LYS  357      11.629 -21.845  -0.316  1.00 42.91
ATOM  1516  C   LYS  357      15.047 -16.619   3.918  1.00 23.18
ATOM  1517  O   LYS  357      15.816 -16.396   2.982  1.00 42.91
ATOM  1518  N   HIS  358      15.228 -16.122   5.137  1.00 32.39
ATOM  1519  CA  HIS  358      16.367 -15.272   5.460  1.00 32.39
ATOM  1520  CB  HIS  358      16.181 -14.626   6.835  1.00 26.77
ATOM  1521  CG  HIS  358      15.232 -13.468   6.841  1.00 26.77
ATOM  1522  CD2 HIS  358      15.452 -12.138   6.709  1.00 26.77
ATOM  1523  ND1 HIS  358      13.875 -13.615   7.028  1.00 26.77
ATOM  1524  CE1 HIS  358      13.300 -12.426   7.012  1.00 26.77
ATOM  1525  NE2 HIS  358      14.234 -11.513   6.821  1.00 26.77
ATOM  1526  C   HIS  358      17.633 -16.115   5.480  1.00 32.39
ATOM  1527  O   HIS  358      17.618 -17.248   5.961  1.00 26.77
ATOM  1528  N   ASN  359      18.728 -15.561   4.972  1.00 41.97
ATOM  1529  CA  ASN  359      20.000 -16.273   4.959  1.00 41.97
ATOM  1530  CB  ASN  359      20.909 -15.716   3.863  1.00 46.84
ATOM  1531  C   ASN  359      20.663 -16.134   6.331  1.00 41.97
ATOM  1532  O   ASN  359      21.821 -15.731   6.436  1.00 46.84
ATOM  1533  N   ILE  360      19.908 -16.450   7.379  1.00 35.72
ATOM  1534  CA  ILE  360      20.394 -16.359   8.753  1.00 35.72
ATOM  1535  CB  ILE  360      19.819 -15.113   9.480  1.00 36.14
ATOM  1536  CG2 ILE  360      20.327 -15.050  10.918  1.00 36.14
ATOM  1537  CG1 ILE  360      20.204 -13.833   8.734  1.00 36.14
ATOM  1538  CD1 ILE  360      19.526 -12.591   9.265  1.00 36.14
ATOM  1539  C   ILE  360      19.935 -17.611   9.493  1.00 35.72
ATOM  1540  O   ILE  360      18.748 -17.953   9.479  1.00 36.14
ATOM  1541  N   PRO  361      20.877 -18.338  10.109  1.00 31.56
ATOM  1542  CD  PRO  361      22.334 -18.114  10.100  1.00 33.50
ATOM  1543  CA  PRO  361      20.532 -19.556  10.847  1.00 31.56
ATOM  1544  CB  PRO  361      21.901 -20.163  11.161  1.00 33.50
ATOM  1545  CG  PRO  361      22.801 -18.967  11.249  1.00 33.50
ATOM  1546  C   PRO  361      19.743 -19.256  12.121  1.00 31.56
ATOM  1547  O   PRO  361      20.080 -18.338  12.867  1.00 33.50
ATOM  1548  N   HIS  362      18.688 -20.034  12.355  1.00 18.84
ATOM  1549  CA  HIS  362      17.840 -19.887  13.541  1.00 18.84
ATOM  1550  CB  HIS  362      18.656 -20.151  14.812  1.00 31.38
ATOM  1551  CG  HIS  362      19.540 -21.357  14.731  1.00 31.38
ATOM  1552  CD2 HIS  362      19.250 -22.667  14.537  1.00 31.38
ATOM  1553  ND1 HIS  362      20.910 -21.286  14.860  1.00 31.38
```

ATOM 1554 CE1 HIS 362 21.427 -22.497 14.754 1.00 31.38
ATOM 1555 NE2 HIS 362 20.439 -23.353 14.558 1.00 31.38
ATOM 1556 C HIS 362 17.189 -18.506 13.628 1.00 18.84
ATOM 1557 O HIS 362 16.980 -17.979 14.723 1.00 31.38
ATOM 1558 N PHE 363 16.825 -17.950 12.476 1.00 18.69
ATOM 1559 CA PHE 363 16.209 -16.630 12.408 1.00 18.69
ATOM 1560 CB PHE 363 15.825 -16.302 10.962 1.00 19.25
ATOM 1561 CG PHE 363 15.339 -14.894 10.765 1.00 19.25
ATOM 1562 CD1 PHE 363 16.239 -13.862 10.530 1.00 19.25
ATOM 1563 CD2 PHE 363 13.981 -14.598 10.819 1.00 19.25
ATOM 1564 CE1 PHE 363 15.794 -12.556 10.351 1.00 19.25
ATOM 1565 CE2 PHE 363 13.527 -13.296 10.642 1.00 19.25
ATOM 1566 CZ PHE 363 14.435 -12.273 10.407 1.00 19.25
ATOM 1567 C PHE 363 14.995 -16.461 13.323 1.00 18.69
ATOM 1568 O PHE 363 14.955 -15.540 14.138 1.00 19.25
ATOM 1569 N TRP 364 14.016 -17.351 13.191 1.00 16.46
ATOM 1570 CA TRP 364 12.797 -17.280 13.995 1.00 16.46
ATOM 1571 CB TRP 364 11.882 -18.482 13.706 1.00 17.81
ATOM 1572 CG TRP 364 10.588 -18.488 14.481 1.00 17.81
ATOM 1573 CD2 TRP 364 9.586 -17.458 14.504 1.00 17.81
ATOM 1574 CE2 TRP 364 8.547 -17.905 15.350 1.00 17.81
ATOM 1575 CE3 TRP 364 9.467 -16.202 13.894 1.00 17.81
ATOM 1576 CD1 TRP 364 10.126 -19.486 15.290 1.00 17.81
ATOM 1577 NE1 TRP 364 8.902 -19.144 15.814 1.00 17.81
ATOM 1578 CZ2 TRP 364 7.403 -17.142 15.602 1.00 17.81
ATOM 1579 CZ3 TRP 364 8.329 -15.444 14.145 1.00 17.81
ATOM 1580 CH2 TRP 364 7.312 -15.919 14.992 1.00 17.81
ATOM 1581 C TRP 364 13.046 -17.114 15.500 1.00 16.46
ATOM 1582 O TRP 364 12.595 -16.133 16.087 1.00 17.81
ATOM 1583 N PRO 365 13.779 -18.051 16.137 1.00 18.31
ATOM 1584 CD PRO 365 14.342 -19.314 15.625 1.00 25.61
ATOM 1585 CA PRO 365 14.038 -17.920 17.577 1.00 18.31
ATOM 1586 CB PRO 365 14.939 -19.118 17.874 1.00 25.61
ATOM 1587 CG PRO 365 14.500 -20.130 16.882 1.00 25.61
ATOM 1588 C PRO 365 14.732 -16.606 17.933 1.00 18.31
ATOM 1589 O PRO 365 14.387 -15.963 18.926 1.00 25.61
ATOM 1590 N LYS 366 15.699 -16.207 17.112 1.00 25.16
ATOM 1591 CA LYS 366 16.439 -14.968 17.338 1.00 25.16
ATOM 1592 CB LYS 366 17.537 -14.805 16.289 1.00 40.51
ATOM 1593 CG LYS 366 18.679 -15.792 16.417 1.00 40.51
ATOM 1594 CD LYS 366 19.664 -15.607 15.278 1.00 40.51
ATOM 1595 CE LYS 366 20.884 -16.492 15.440 1.00 40.51
ATOM 1596 NZ LYS 366 21.800 -16.360 14.275 1.00 40.51
ATOM 1597 C LYS 366 15.521 -13.747 17.317 1.00 25.16
ATOM 1598 O LYS 366 15.593 -12.893 18.202 1.00 40.51
ATOM 1599 N LEU 367 14.661 -13.666 16.307 1.00 25.30
ATOM 1600 CA LEU 367 13.729 -12.551 16.184 1.00 25.30

ATOM 1601 CB LEU 367 12.989 -12.620 14.845 1.00 27.80
ATOM 1602 CG LEU 367 11.964 -11.519 14.561 1.00 27.80
ATOM 1603 CD1 LEU 367 12.621 -10.147 14.679 1.00 27.80
ATOM 1604 CD2 LEU 367 11.367 -11.724 13.175 1.00 27.80
ATOM 1605 C LEU 367 12.730 -12.596 17.332 1.00 25.30
ATOM 1606 O LEU 367 12.337 -11.563 17.877 1.00 27.80
ATOM 1607 N LEU 368 12.345 -13.807 17.712 1.00 26.12
ATOM 1608 CA LEU 368 11.396 -14.019 18.793 1.00 26.12
ATOM 1609 CB LEU 368 11.105 -15.515 18.919 1.00 33.27
ATOM 1610 CG LEU 368 9.696 -15.976 19.289 1.00 33.27
ATOM 1611 CD1 LEU 368 8.640 -15.182 18.529 1.00 33.27
ATOM 1612 CD2 LEU 368 9.582 -17.460 18.976 1.00 33.27
ATOM 1613 C LEU 368 11.973 -13.466 20.096 1.00 26.12
ATOM 1614 O LEU 368 11.249 -12.920 20.930 1.00 33.27
ATOM 1615 N MET 369 13.289 -13.571 20.244 1.00 24.39
ATOM 1616 CA MET 369 13.971 -13.076 21.432 1.00 24.39
ATOM 1617 CB MET 369 15.382 -13.656 21.511 1.00 47.44
ATOM 1618 CG MET 369 15.407 -15.096 22.009 1.00 47.44
ATOM 1619 SD MET 369 16.850 -16.029 21.464 1.00 47.44
ATOM 1620 CE MET 369 18.186 -15.114 22.246 1.00 47.44
ATOM 1621 C MET 369 13.996 -11.552 21.491 1.00 24.39
ATOM 1622 O MET 369 14.212 -10.971 22.557 1.00 47.44
ATOM 1623 N LYS 370 13.749 -10.904 20.354 1.00 27.31
ATOM 1624 CA LYS 370 13.713 -9.445 20.297 1.00 27.31
ATOM 1625 CB LYS 370 13.739 -8.951 18.847 1.00 28.20
ATOM 1626 CG LYS 370 15.004 -9.312 18.090 1.00 28.20
ATOM 1627 CD LYS 370 16.231 -8.810 18.824 1.00 28.20
ATOM 1628 CE LYS 370 17.512 -9.244 18.142 1.00 28.20
ATOM 1629 NZ LYS 370 18.696 -8.851 18.952 1.00 28.20
ATOM 1630 C LYS 370 12.453 -8.945 21.002 1.00 27.31
ATOM 1631 O LYS 370 12.424 -7.835 21.535 1.00 28.20
ATOM 1632 N VAL 371 11.413 -9.776 21.009 1.00 26.41
ATOM 1633 CA VAL 371 10.157 -9.432 21.668 1.00 26.41
ATOM 1634 CB VAL 371 9.109 -10.561 21.512 1.00 25.61
ATOM 1635 CG1 VAL 371 7.825 -10.205 22.245 1.00 25.61
ATOM 1636 CG2 VAL 371 8.819 -10.805 20.044 1.00 25.61
ATOM 1637 C VAL 371 10.450 -9.205 23.151 1.00 26.41
ATOM 1638 O VAL 371 9.962 -8.248 23.752 1.00 25.61
ATOM 1639 N THR 372 11.294 -10.065 23.713 1.00 26.28
ATOM 1640 CA THR 372 11.683 -9.972 25.116 1.00 26.28
ATOM 1641 CB THR 372 12.656 -11.109 25.500 1.00 28.14
ATOM 1642 OG1 THR 372 12.025 -12.377 25.275 1.00 28.14
ATOM 1643 CG2 THR 372 13.055 -11.001 26.965 1.00 28.14
ATOM 1644 C THR 372 12.358 -8.624 25.372 1.00 26.28
ATOM 1645 O THR 372 12.047 -7.937 26.350 1.00 28.14
ATOM 1646 N ASP 373 13.269 -8.247 24.478 1.00 15.09
ATOM 1647 CA ASP 373 13.977 -6.979 24.588 1.00 15.09

ATOM 1648 CB ASP 373 14.976 -6.822 23.435 1.00 37.94
ATOM 1649 CG ASP 373 16.065 -7.893 23.445 1.00 37.94
ATOM 1650 OD1 ASP 373 16.248 -8.571 24.483 1.00 37.94
ATOM 1651 OD2 ASP 373 16.750 -8.052 22.410 1.00 37.94
ATOM 1652 C ASP 373 12.969 -5.833 24.577 1.00 15.09
ATOM 1653 O ASP 373 13.040 -4.928 25.407 1.00 37.94
ATOM 1654 N LEU 374 12.008 -5.901 23.659 1.00 17.04
ATOM 1655 CA LEU 374 10.974 -4.880 23.549 1.00 17.04
ATOM 1656 CB LEU 374 10.071 -5.155 22.344 1.00 20.58
ATOM 1657 CG LEU 374 10.624 -4.720 20.985 1.00 20.58
ATOM 1658 CD1 LEU 374 9.826 -5.352 19.862 1.00 20.58
ATOM 1659 CD2 LEU 374 10.599 -3.202 20.882 1.00 20.58
ATOM 1660 C LEU 374 10.145 -4.786 24.825 1.00 17.04
ATOM 1661 O LEU 374 9.783 -3.688 25.256 1.00 20.58
ATOM 1662 N ARG 375 9.850 -5.935 25.430 1.00 20.46
ATOM 1663 CA ARG 375 9.080 -5.977 26.673 1.00 20.46
ATOM 1664 CB ARG 375 8.873 -7.422 27.140 1.00 55.89
ATOM 1665 CG ARG 375 8.180 -8.354 26.152 1.00 55.89
ATOM 1666 CD ARG 375 6.692 -8.084 26.027 1.00 55.89
ATOM 1667 NE ARG 375 5.943 -9.338 25.968 1.00 55.89
ATOM 1668 CZ ARG 375 5.054 -9.654 25.028 1.00 55.89
ATOM 1669 NH1 ARG 375 4.782 -8.808 24.040 1.00 55.89
ATOM 1670 NH2 ARG 375 4.438 -10.829 25.073 1.00 55.89
ATOM 1671 C ARG 375 9.874 -5.221 27.735 1.00 20.46
ATOM 1672 O ARG 375 9.328 -4.391 28.463 1.00 55.89
ATOM 1673 N MET 376 11.174 -5.502 27.794 1.00 20.10
ATOM 1674 CA MET 376 12.076 -4.863 28.744 1.00 20.10
ATOM 1675 CB MET 376 13.493 -5.417 28.580 1.00 63.73
ATOM 1676 CG MET 376 13.956 -6.310 29.722 1.00 63.73
ATOM 1677 SD MET 376 14.494 -5.373 31.182 1.00 63.73
ATOM 1678 CE MET 376 12.934 -5.151 32.087 1.00 63.73
ATOM 1679 C MET 376 12.081 -3.347 28.566 1.00 20.10
ATOM 1680 O MET 376 11.973 -2.602 29.539 1.00 63.73
ATOM 1681 N ILE 377 12.194 -2.896 27.321 1.00 30.02
ATOM 1682 CA ILE 377 12.198 -1.469 27.014 1.00 30.02
ATOM 1683 CB ILE 377 12.329 -1.228 25.488 1.00 19.31
ATOM 1684 CG2 ILE 377 12.088 0.242 25.152 1.00 19.31
ATOM 1685 CG1 ILE 377 13.711 -1.685 25.011 1.00 19.31
ATOM 1686 CD1 ILE 377 13.906 -1.634 23.507 1.00 19.31
ATOM 1687 C ILE 377 10.915 -0.821 27.542 1.00 30.02
ATOM 1688 O ILE 377 10.962 0.216 28.211 1.00 19.31
ATOM 1689 N GLY 378 9.779 -1.455 27.266 1.00 21.85
ATOM 1690 CA GLY 378 8.505 -0.936 27.729 1.00 21.85
ATOM 1691 C GLY 378 8.459 -0.821 29.243 1.00 21.85
ATOM 1692 O GLY 378 7.990 0.185 29.779 1.00 34.01
ATOM 1693 N ALA 379 8.967 -1.842 29.928 1.00 31.30
ATOM 1694 CA ALA 379 8.996 -1.870 31.388 1.00 31.30

ATOM 1695 CB ALA 379 9.471 -3.231 31.880 1.00 30.06
ATOM 1696 C ALA 379 9.895 -0.763 31.938 1.00 31.30
ATOM 1697 O ALA 379 9.482 0.002 32.810 1.00 30.06
ATOM 1698 N CYS 380 11.117 -0.677 31.418 1.00 28.61
ATOM 1699 CA CYS 380 12.067 0.349 31.841 1.00 28.61
ATOM 1700 CB CYS 380 13.360 0.268 31.025 1.00 60.26
ATOM 1701 SG CYS 380 14.499 -1.067 31.470 1.00 60.26
ATOM 1702 C CYS 380 11.449 1.730 31.658 1.00 28.61
ATOM 1703 O CYS 380 11.516 2.573 32.554 1.00 60.26
ATOM 1704 N HIS 381 10.840 1.957 30.498 1.00 30.42
ATOM 1705 CA HIS 381 10.212 3.243 30.216 1.00 30.42
ATOM 1706 CB HIS 381 9.696 3.306 28.779 1.00 16.49
ATOM 1707 CG HIS 381 8.942 4.562 28.472 1.00 16.49
ATOM 1708 CD2 HIS 381 9.370 5.805 28.151 1.00 16.49
ATOM 1709 ND1 HIS 381 7.566 4.633 28.524 1.00 16.49
ATOM 1710 CE1 HIS 381 7.180 5.866 28.251 1.00 16.49
ATOM 1711 NE2 HIS 381 8.255 6.596 28.021 1.00 16.49
ATOM 1712 C HIS 381 9.073 3.539 31.182 1.00 30.42
ATOM 1713 O HIS 381 8.856 4.690 31.552 1.00 16.49
ATOM 1714 N ALA 382 8.330 2.506 31.564 1.00 22.89
ATOM 1715 CA ALA 382 7.218 2.666 32.493 1.00 22.89
ATOM 1716 CB ALA 382 6.520 1.336 32.708 1.00 34.50
ATOM 1717 C ALA 382 7.738 3.213 33.819 1.00 22.89
ATOM 1718 O ALA 382 7.219 4.200 34.343 1.00 34.50
ATOM 1719 N SER 383 8.789 2.586 34.336 1.00 26.39
ATOM 1720 CA SER 383 9.400 3.006 35.591 1.00 26.39
ATOM 1721 CB SER 383 10.510 2.030 35.985 1.00 52.94
ATOM 1722 OG SER 383 10.015 0.702 36.046 1.00 52.94
ATOM 1723 C SER 383 9.966 4.418 35.470 1.00 26.39
ATOM 1724 O SER 383 9.772 5.253 36.357 1.00 52.94
ATOM 1725 N ARG 384 10.662 4.683 34.368 1.00 30.36
ATOM 1726 CA ARG 384 11.249 5.995 34.134 1.00 30.36
ATOM 1727 CB ARG 384 12.116 5.977 32.874 1.00 37.39
ATOM 1728 CG ARG 384 12.601 7.344 32.431 1.00 37.39
ATOM 1729 CD ARG 384 14.070 7.321 32.060 1.00 37.39
ATOM 1730 NE ARG 384 14.935 7.597 33.204 1.00 37.39
ATOM 1731 CZ ARG 384 15.750 8.646 33.291 1.00 37.39
ATOM 1732 NH1 ARG 384 15.824 9.529 32.303 1.00 37.39
ATOM 1733 NH2 ARG 384 16.488 8.819 34.376 1.00 37.39
ATOM 1734 C ARG 384 10.169 7.067 34.030 1.00 30.36
ATOM 1735 O ARG 384 10.301 8.144 34.616 1.00 37.39
ATOM 1736 N PHE 385 9.078 6.749 33.338 1.00 24.47
ATOM 1737 CA PHE 385 7.980 7.693 33.171 1.00 24.47
ATOM 1738 CB PHE 385 6.859 7.092 32.319 1.00 28.70
ATOM 1739 CG PHE 385 5.710 8.036 32.075 1.00 28.70
ATOM 1740 CD1 PHE 385 5.795 9.017 31.092 1.00 28.70
ATOM 1741 CD2 PHE 385 4.549 7.954 32.836 1.00 28.70

ATOM 1742 CE1 PHE 385 4.740 9.903 30.874 1.00 28.70
ATOM 1743 CE2 PHE 385 3.491 8.835 32.624 1.00 28.70
ATOM 1744 CZ PHE 385 3.587 9.812 31.641 1.00 28.70
ATOM 1745 C PHE 385 7.436 8.097 34.533 1.00 24.47
ATOM 1746 O PHE 385 7.250 9.285 34.805 1.00 28.70
ATOM 1747 N LEU 386 7.208 7.107 35.391 1.00 31.13
ATOM 1748 CA LEU 386 6.690 7.352 36.734 1.00 31.13
ATOM 1749 CB LEU 386 6.596 6.044 37.513 1.00 39.10
ATOM 1750 C LEU 386 7.577 8.348 37.474 1.00 31.13
ATOM 1751 O LEU 386 7.085 9.201 38.217 1.00 39.10
ATOM 1752 N HIS 387 8.884 8.254 37.243 1.00 36.46
ATOM 1753 CA HIS 387 9.837 9.152 37.881 1.00 36.46
ATOM 1754 CB HIS 387 11.258 8.589 37.794 1.00 62.78
ATOM 1755 CG HIS 387 11.459 7.338 38.590 1.00 62.78
ATOM 1756 CD2 HIS 387 10.601 6.614 39.346 1.00 62.78
ATOM 1757 ND1 HIS 387 12.675 6.689 38.663 1.00 62.78
ATOM 1758 CE1 HIS 387 12.554 5.620 39.431 1.00 62.78
ATOM 1759 NE2 HIS 387 11.309 5.550 39.856 1.00 62.78
ATOM 1760 C HIS 387 9.778 10.544 37.266 1.00 36.46
ATOM 1761 O HIS 387 9.885 11.543 37.979 1.00 62.78
ATOM 1762 N MET 388 9.587 10.612 35.950 1.00 33.41
ATOM 1763 CA MET 388 9.505 11.894 35.258 1.00 33.41
ATOM 1764 CB MET 388 9.269 11.703 33.755 1.00 42.63
ATOM 1765 CG MET 388 10.456 11.144 32.982 1.00 42.63
ATOM 1766 SD MET 388 10.253 11.325 31.192 1.00 42.63
ATOM 1767 CE MET 388 9.501 9.772 30.748 1.00 42.63
ATOM 1768 C MET 388 8.385 12.746 35.849 1.00 33.41
ATOM 1769 O MET 388 8.573 13.934 36.103 1.00 42.63
ATOM 1770 N LYS 389 7.235 12.126 36.092 1.00 39.26
ATOM 1771 CA LYS 389 6.082 12.825 36.659 1.00 39.26
ATOM 1772 CB LYS 389 4.867 11.900 36.719 1.00 52.87
ATOM 1773 CG LYS 389 4.237 11.594 35.379 1.00 52.87
ATOM 1774 CD LYS 389 3.048 10.667 35.553 1.00 52.87
ATOM 1775 CE LYS 389 3.482 9.327 36.125 1.00 52.87
ATOM 1776 NZ LYS 389 2.335 8.407 36.326 1.00 52.87
ATOM 1777 C LYS 389 6.363 13.360 38.056 1.00 39.26
ATOM 1778 O LYS 389 5.837 14.404 38.452 1.00 52.87
ATOM 1779 N VAL 390 7.156 12.614 38.818 1.00 44.18
ATOM 1780 CA VAL 390 7.508 13.016 40.172 1.00 44.18
ATOM 1781 CB VAL 390 8.299 11.898 40.905 1.00 50.50
ATOM 1782 CG1 VAL 390 8.718 12.362 42.293 1.00 50.50
ATOM 1783 CG2 VAL 390 7.455 10.640 41.012 1.00 50.50
ATOM 1784 C VAL 390 8.352 14.288 40.145 1.00 44.18
ATOM 1785 O VAL 390 8.144 15.198 40.948 1.00 50.50
ATOM 1786 N GLU 391 9.261 14.368 39.179 1.00 38.64
ATOM 1787 CA GLU 391 10.161 15.509 39.056 1.00 38.64
ATOM 1788 CB GLU 391 11.483 15.060 38.424 1.00 64.18

ATOM 1789 CG GLU 391 12.065 13.766 39.009 1.00 64.18
ATOM 1790 CD GLU 391 12.662 13.922 40.405 1.00 64.18
ATOM 1791 OE1 GLU 391 12.190 14.773 41.192 1.00 64.18
ATOM 1792 OE2 GLU 391 13.611 13.173 40.721 1.00 64.18
ATOM 1793 C GLU 391 9.623 16.737 38.314 1.00 38.64
ATOM 1794 O- GLU 391 9.656 17.850 38.849 1.00 64.18
ATOM 1795 N CYS 392 9.125 16.539 37.096 1.00 37.24
ATOM 1796 CA CYS 392 8.611 17.635 36.271 1.00 37.24
ATOM 1797 CB CYS 392 8.879 17.345 34.784 1.00 30.64
ATOM 1798 SG CYS 392 10.634 17.137 34.283 1.00 30.64
ATOM 1799 C CYS 392 7.110 17.882 36.496 1.00 37.24
ATOM 1800 O CYS 392 6.403 17.011 37.006 1.00 30.64
ATOM 1801 N PRO 393 6.625 19.107 36.199 1.00 40.56
ATOM 1802 CD PRO 393 7.444 20.297 35.904 1.00 33.41
ATOM 1803 CA PRO 393 5.209 19.473 36.358 1.00 40.56
ATOM 1804 CB PRO 393 5.253 21.001 36.404 1.00 33.41
ATOM 1805 CG PRO 393 6.409 21.332 35.527 1.00 33.41
ATOM 1806 C PRO 393 4.330 18.975 35.207 1.00 40.56
ATOM 1807 O PRO 393 4.776 18.907 34.057 1.00 33.41
ATOM 1808 N THR 394 3.067 18.691 35.516 1.00 41.91
ATOM 1809 CA THR 394 2.101 18.186 34.540 1.00 41.91
ATOM 1810 CB THR 394 0.691 18.075 35.156 1.00 62.04
ATOM 1811 OG1 THR 394 0.706 18.582 36.497 1.00 62.04
ATOM 1812 CG2 THR 394 0.232 16.626 35.168 1.00 62.04
ATOM 1813 C THR 394 1.995 18.984 33.242 1.00 41.91
ATOM 1814 O THR 394 1.758 18.411 32.181 1.00 62.04
ATOM 1815 N GLU 395 2.191 20.297 33.327 1.00 43.92
ATOM 1816 CA GLU 395 2.104 21.176 32.160 1.00 43.92
ATOM 1817 CB GLU 395 2.313 22.626 32.585 1.00 34.22
ATOM 1818 C GLU 395 3.071 20.814 31.031 1.00 43.92
ATOM 1819 O GLU 395 2.887 21.243 29.891 1.00 34.22
ATOM 1820 N LEU 396 4.104 20.041 31.350 1.00 34.92
ATOM 1821 CA LEU 396 5.096 19.634 30.359 1.00 34.92
ATOM 1822 CB LEU 396 6.473 19.495 31.017 1.00 35.81
ATOM 1823 CG LEU 396 7.074 20.747 31.662 1.00 35.81
ATOM 1824 CD1 LEU 396 8.427 20.410 32.263 1.00 35.81
ATOM 1825 CD2 LEU 396 7.209 21.857 30.629 1.00 35.81
ATOM 1826 C LEU 396 4.731 18.324 29.661 1.00 34.92
ATOM 1827 O LEU 396 5.343 17.954 28.659 1.00 35.81
ATOM 1828 N PHE 397 3.734 17.627 30.197 1.00 35.28
ATOM 1829 CA PHE 397 3.302 16.352 29.640 1.00 35.28
ATOM 1830 CB PHE 397 3.059 15.341 30.764 1.00 27.13
ATOM 1831 CG PHE 397 4.285 15.004 31.561 1.00 27.13
ATOM 1832 CD1 PHE 397 4.700 15.824 32.604 1.00 27.13
ATOM 1833 CD2 PHE 397 5.021 13.860 31.273 1.00 27.13
ATOM 1834 CE1 PHE 397 5.831 15.510 33.349 1.00 27.13
ATOM 1835 CE2 PHE 397 6.155 13.537 32.013 1.00 27.13

ATOM 1836 CZ PHE 397 6.561 14.364 33.052 1.00 27.13
ATOM 1837 C PHE 397 2.027 16.474 28.812 1.00 35.28
ATOM 1838 O PHE 397 0.977 16.861 29.331 1.00 27.13
ATOM 1839 N PRO 398 2.102 16.164 27.505 1.00 26.41
ATOM 1840 CD PRO 398 3.305 15.850 26.713 1.00 19.32
ATOM 1841 CA PRO 398 0.917 16.247 26.647 1.00 26.41
ATOM 1842 CB PRO 398 1.439 15.752 25.300 1.00 19.32
ATOM 1843 CG PRO 398 2.867 16.193 25.312 1.00 19.32
ATOM 1844 C PRO 398 -0.157 15.313 27.206 1.00 26.41
ATOM 1845 O PRO 398 0.160 14.232 27.710 1.00 19.32
ATOM 1846 N PRO 399 -1.439 15.702 27.104 1.00 25.12
ATOM 1847 CD PRO 399 -1.935 16.929 26.454 1.00 24.32
ATOM 1848 CA PRO 399 -2.554 14.894 27.612 1.00 25.12
ATOM 1849 CB PRO 399 -3.777 15.594 27.022 1.00 24.32
ATOM 1850 CG PRO 399 -3.349 17.026 26.974 1.00 24.32
ATOM 1851 C PRO 399 -2.502 13.416 27.222 1.00 25.12
ATOM 1852 O PRO 399 -2.599 12.540 28.085 1.00 24.32
ATOM 1853 N LEU 400 -2.322 13.139 25.933 1.00 23.10
ATOM 1854 CA LEU 400 -2.265 11.759 25.454 1.00 23.10
ATOM 1855 CB LEU 400 -2.230 11.720 23.923 1.00 22.35
ATOM 1856 CG LEU 400 -2.485 10.354 23.276 1.00 22.35
ATOM 1857 CD1 LEU 400 -3.792 9.765 23.792 1.00 22.35
ATOM 1858 CD2 LEU 400 -2.523 10.494 21.763 1.00 22.35
ATOM 1859 C LEU 400 -1.066 11.012 26.032 1.00 23.10
ATOM 1860 O LEU 400 -1.160 9.825 26.345 1.00 22.35
ATOM 1861 N PHE 401 0.044 11.723 26.202 1.00 13.85
ATOM 1862 CA PHE 401 1.269 11.150 26.755 1.00 13.85
ATOM 1863 CB PHE 401 2.374 12.213 26.753 1.00 26.97
ATOM 1864 CG PHE 401 3.729 11.702 27.164 1.00 26.97
ATOM 1865 CD1 PHE 401 4.189 10.461 26.732 1.00 26.97
ATOM 1866 CD2 PHE 401 4.561 12.481 27.963 1.00 26.97
ATOM 1867 CE1 PHE 401 5.459 10.005 27.091 1.00 26.97
ATOM 1868 CE2 PHE 401 5.830 12.035 28.327 1.00 26.97
ATOM 1869 CZ PHE 401 6.280 10.795 27.889 1.00 26.97
ATOM 1870 C PHE 401 0.993 10.659 28.179 1.00 13.85
ATOM 1871 O PHE 401 1.393 9.558 28.555 1.00 26.97
ATOM 1872 N LEU 402 0.274 11.473 28.947 1.00 25.21
ATOM 1873 CA LEU 402 -0.080 11.145 30.325 1.00 25.21
ATOM 1874 CB LEU 402 -0.640 12.380 31.035 1.00 29.34
ATOM 1875 CG LEU 402 0.334 13.411 31.600 1.00 29.34
ATOM 1876 CD1 LEU 402 -0.430 14.658 32.018 1.00 29.34
ATOM 1877 CD2 LEU 402 1.090 12.814 32.775 1.00 29.34
ATOM 1878 C LEU 402 -1.109 10.025 30.425 1.00 25.21
ATOM 1879 O LEU 402 -1.034 9.189 31.320 1.00 29.34
ATOM 1880 N GLU 403 -2.090 10.043 29.529 1.00 23.54
ATOM 1881 CA GLU 403 -3.159 9.046 29.521 1.00 23.54
ATOM 1882 CB GLU 403 -4.274 9.482 28.562 1.00 63.22

```
ATOM  1883  CG  GLU   403      -5.469   8.531  28.506  1.00 63.22
ATOM  1884  CD  GLU   403      -6.530   8.952  27.498  1.00 63.22
ATOM  1885  OE1 GLU   403      -6.237   9.786  26.613  1.00 63.22
ATOM  1886  OE2 GLU   403      -7.666   8.436  27.589  1.00 63.22
ATOM  1887  C   GLU   403      -2.708   7.629  29.170  1.00 23.54
ATOM  1888  O-  GLU   403      -3.210   6.656  29.735  1.00 63.22
ATOM  1889  N   VAL   404      -1.787   7.515  28.221  1.00 33.24
ATOM  1890  CA  VAL   404      -1.297   6.213  27.782  1.00 33.24
ATOM  1891  CB  VAL   404      -0.621   6.314  26.390  1.00 30.71
ATOM  1892  CG1 VAL   404      -0.097   4.957  25.947  1.00 30.71
ATOM  1893  CG2 VAL   404      -1.611   6.841  25.371  1.00 30.71
ATOM  1894  C   VAL   404      -0.338   5.528  28.752  1.00 33.24
ATOM  1895  O   VAL   404      -0.386   4.305  28.914  1.00 30.71
ATOM  1896  N   PHE   405       0.526   6.309  29.392  1.00 33.66
ATOM  1897  CA  PHE   405       1.516   5.752  30.308  1.00 33.66
ATOM  1898  CB  PHE   405       2.901   6.326  29.984  1.00 34.35
ATOM  1899  CG  PHE   405       3.343   6.076  28.568  1.00 34.35
ATOM  1900  CD1 PHE   405       3.519   7.134  27.683  1.00 34.35
ATOM  1901  CD2 PHE   405       3.569   4.782  28.114  1.00 34.35
ATOM  1902  CE1 PHE   405       3.911   6.906  26.365  1.00 34.35
ATOM  1903  CE2 PHE   405       3.960   4.545  26.798  1.00 34.35
ATOM  1904  CZ  PHE   405       4.131   5.610  25.922  1.00 34.35
ATOM  1905  C   PHE   405       1.189   5.931  31.790  1.00 33.66
ATOM  1906  O   PHE   405       2.036   5.539  32.623  1.00 34.35
ATOM  1907  OXT PHE   405       0.090   6.434  32.107  1.00 34.35
ATOM  1908  C1  TRI     1       8.375   7.063  18.475  1.00 34.21
ATOM  1909  C2  TRI     1      10.048   8.688  23.016  1.00 33.36
ATOM  1910  C3  TRI     1       8.104   8.391  18.941  1.00 34.21
ATOM  1911  C4  TRI     1      10.496   9.696  23.813  1.00 33.36
ATOM  1912  C5  TRI     1       8.916   8.943  19.927  1.00 34.21
ATOM  1913  C6  TRI     1      10.152   9.772  25.121  1.00 33.36
ATOM  1914  C7  TRI     1       9.862   8.178  20.609  1.00 34.21
ATOM  1915  C8  TRI     1       9.246   8.821  25.653  1.00 33.36
ATOM  1916  C9  TRI     1      10.117   6.865  20.147  1.00 34.21
ATOM  1917  C10 TRI     1       8.805   7.754  24.847  1.00 33.36
ATOM  1918  C11 TRI     1       9.375   6.339  19.026  1.00 34.21
ATOM  1919  C12 TRI     1       9.125   7.756  23.490  1.00 33.36
ATOM  1920  C13 TRI     1       7.540   6.470  17.383  1.00 35.85
ATOM  1921  C15 TRI     1       8.158   6.555  15.938  1.00 35.85
ATOM  1922  I1  TRI     1       8.713  10.990  20.395  1.00 34.21
ATOM  1923  I2  TRI     1      10.951  11.289  26.315  1.00 33.36
ATOM  1924  I3  TRI     1      11.592   5.685  21.118  1.00 34.21
ATOM  1925  O3  TRI     1       9.407   6.654  15.852  1.00 35.85
ATOM  1926  O2  TRI     1      10.570   8.649  21.717  1.00 33.36
ATOM  1927  O1  TRI     1       8.798   8.969  26.979  1.00 33.36
ATOM  1928  O4  TRI     1       7.352   6.522  14.973  1.00 35.85
ATOM  1929  O1  HOH   501       9.189   2.098  11.091  1.00 33.36
```

```
ATOM   1930  O1  HOH   503      5.152   5.261  12.137  1.00 33.36
ATOM   1931  O1  HOH   504      3.970   5.057  16.390  1.00 33.36
ATOM   1932  O1  HOH   534      8.296  -0.941   8.998  1.00 33.36
ATOM   1933  O1  HOH   538      4.845  14.369  13.635  1.00 33.36
ATOM   1934  O1  HOH   540      5.789  12.049  10.352  1.00 33.36
ATOM   1936  O1  HOH   555      5.721   2.525  28.939  1.00 33.36
ATOM   1937  O1  HOH   556      3.732   1.273  26.724  1.00 33.36
ATOM   1935  O1  HOH   600      8.767   4.847   8.517  1.00 33.36
ATOM   1938  AS1 CAD   701      1.863   1.579   0.837  1.00 37.00
ATOM   1939  C2  CAD   701      1.760  -0.100   0.335  1.00 33.36
ATOM   1940  C3  CAD   701      3.511   1.872   1.858  1.00 28.02
ATOM   1941  O4  CAD   701      1.785   2.506  -0.433  1.00 28.02
ATOM   1942  O5  CAD   701      0.592   2.019   1.654  1.00 28.02
ATOM   1943  AS  AS    801     11.254  16.718  33.126  1.00 37.00      AS
ATOM   1944  AS  AS    802     16.338  -1.161  29.914  1.00 37.00      AS
ATOM   1945  AS  AS    803    -14.931 -11.763  25.324  1.00 37.00      AS
END
```

APPENDIX 5

TR_IPBR2.PDB

```
REMARK rTR_ipbr2 full length numbering
REMARK .
REMARK Rfactor 0.214 Rfree 0.224
REMARK Resolution 15. 2.2 all reflections
REMARK
REMARK Three cacodylate-modified cysteines (CYA)
REMARK Cya334, Cya380, Cya392
REMARK cacodylate modeled as single arsenic atom
REMARK
REMARK side chain of certain residues modeled as ALA due to poor
density;
REMARK however, residue name reflects true residue for clarity
REMARK
REMARK clone obtained from Murray et. al.
REMARK deposited sequence confirmed,
REMARK differing from that reported by Thompson et. al.
REMARK in the following codons:
REMARK 281 Thr - Ala
REMARK 285 Lys - Glu
REMARK identical to that reported by Mitsuhashi et. al.
REMARK gb:RNTRAVI X07409
JRNL      AUTH   M.B. MURRAY, N.D.ZILZ, N.L.MCCREARY,M.J.MACDONALD
JRNL      AUTH 2 H.C.TOWLE
JRNL      TITL   ISOLATION AND CHARACTERIZATION OF RAT CDNA CLONES
FOR
TWO
JRNL      TITL 2 DISTINCT THYROID HORMONE RECPTORS
JRNL      REF    JBC                  V. 263 25  1988
JRNL      AUTH   C.C.THOMPSON, C.WEINBERGER, R.LEBO, R.M.EVANS
JRNL      TITL   IDENTIFICATION OF A NOVEL THYROID HORMONE RECEPTOR
EXPRESSED
JRNL      TITL 2 IN THE MAMMALIAN CENTRAL NERVOUS SYSTEM
JRNL      REF    SCIENCE              V. 237     1987
JRNL      AUTH   T.MITSUHASHI,G.TENNYSON,V.NIKODEM
JRNL      TITL   NUCLEOTIDE SEQUENCE OF NOVEL CDNAS GENERATED BY
ALTERNATIVE
JRNL      TITL 2 SPLICING OF A RAT THYROID HORMONE RECEPTOR GENE
TRANSCRIPT
JRNL      REF    NUC. ACIDS. RES.     V. 16  12  1988
REMARK
ATOM      1  CB  ARG   157      68.481  10.663   6.906  1.00 57.50
ATOM      2  CG  ARG   157      69.793  10.213   7.512  1.00 59.93
ATOM      3  CD  ARG   157      70.510  11.365   8.189  1.00 70.24
```

ATOM 4 NE ARG 157 71.661 10.906 8.961 1.00 77.62
ATOM 5 CZ ARG 157 71.599 10.492 10.224 1.00 78.75
ATOM 6 NH1 ARG 157 70.440 10.480 10.870 1.00 74.33
ATOM 7 NH2 ARG 157 72.697 10.075 10.839 1.00 83.44
ATOM 8 C ARG 157 66.314 10.014 5.809 1.00 46.84
ATOM 9 O ARG 157 66.109 10.397 4.659 1.00 54.49
ATOM 10 N ARG 157 68.442 9.069 5.013 1.00 56.54
ATOM 11 CA ARG 157 67.704 9.537 6.222 1.00 52.92
ATOM 12 N PRO 158 65.335 9.953 6.727 1.00 39.44
ATOM 13 CD PRO 158 65.503 9.448 8.099 1.00 41.72
ATOM 14 CA PRO 158 63.946 10.368 6.487 1.00 34.98
ATOM 15 CB PRO 158 63.282 10.172 7.854 1.00 34.92
ATOM 16 CG PRO 158 64.096 9.096 8.487 1.00 45.83
ATOM 17 C PRO 158 63.765 11.804 5.992 1.00 34.13
ATOM 18 O PRO 158 64.223 12.757 6.621 1.00 31.07
ATOM 19 N GLU 159 63.110 11.932 4.841 1.00 31.36
ATOM 20 CA GLU 159 62.814 13.220 4.228 1.00 27.34
ATOM 21 CB GLU 159 62.569 13.041 2.726 1.00 24.27
ATOM 22 CG GLU 159 63.814 12.866 1.887 1.00 24.85
ATOM 23 CD GLU 159 64.409 14.188 1.454 1.00 28.12
ATOM 24 OE1 GLU 159 63.642 15.144 1.224 1.00 29.26
ATOM 25 OE2 GLU 159 65.646 14.269 1.326 1.00 29.52
ATOM 26 C GLU 159 61.528 13.707 4.870 1.00 24.30
ATOM 27 O GLU 159 60.855 12.934 5.566 1.00 29.01
ATOM 28 N PRO 160 61.192 14.989 4.718 1.00 24.62
ATOM 29 CD PRO 160 61.979 16.126 4.188 1.00 18.72
ATOM 30 CA PRO 160 59.947 15.451 5.330 1.00 21.62
ATOM 31 CB PRO 160 59.945 16.955 5.048 1.00 12.71
ATOM 32 CG PRO 160 61.394 17.297 4.930 1.00 15.12
ATOM 33 C PRO 160 58.743 14.752 4.671 1.00 24.61
ATOM 34 O PRO 160 58.789 14.384 3.490 1.00 22.63
ATOM 35 N THR 161 57.705 14.504 5.450 1.00 25.86
ATOM 36 CA THR 161 56.515 13.864 4.921 1.00 23.77
ATOM 37 CB THR 161 55.689 13.201 6.048 1.00 21.75
ATOM 38 OG1 THR 161 55.178 14.210 6.926 1.00 20.78
ATOM 39 CG2 THR 161 56.549 12.227 6.847 1.00 18.44
ATOM 40 C THR 161 55.680 14.967 4.269 1.00 28.67
ATOM 41 O THR 161 55.917 16.151 4.510 1.00 29.90
ATOM 42 N PRO 162 54.685 14.597 3.448 1.00 27.79
ATOM 43 CD PRO 162 54.313 13.237 3.019 1.00 23.25
ATOM 44 CA PRO 162 53.843 15.603 2.795 1.00 26.19
ATOM 45 CB PRO 162 52.699 14.766 2.227 1.00 19.89
ATOM 46 CG PRO 162 53.394 13.492 1.848 1.00 20.63
ATOM 47 C PRO 162 53.334 16.661 3.775 1.00 24.81
ATOM 48 O PRO 162 53.477 17.863 3.526 1.00 21.10
ATOM 49 N GLU 163 52.812 16.198 4.911 1.00 26.34
ATOM 50 CA GLU 163 52.266 17.065 5.959 1.00 30.38

ATOM 51 CB GLU 163 51.640 16.231 7.086 1.00 29.46
ATOM 52 CG GLU 163 50.482 15.321 6.666 1.00 48.37
ATOM 53 CD GLU 163 50.918 14.132 5.816 1.00 53.12
ATOM 54 OE1 GLU 163 51.890 13.441 6.194 1.00 52.22
ATOM 55 OE2 GLU 163 50.282 13.886 4.766 1.00 59.14
ATOM 56 C GLU 163 53.353 17.949 6.552 1.00 26.74
ATOM 57 O GLU 163 53.109 19.107 6.898 1.00 27.03
ATOM 58 N GLU 164 54.553 17.389 6.677 1.00 26.74
ATOM 59 CA GLU 164 55.679 18.124 7.221 1.00 23.65
ATOM 60 CB GLU 164 56.805 17.174 7.609 1.00 18.85
ATOM 61 CG GLU 164 56.441 16.306 8.804 1.00 26.81
ATOM 62 CD GLU 164 57.536 15.334 9.188 1.00 31.06
ATOM 63 OE1 GLU 164 58.404 15.050 8.340 1.00 29.21
ATOM 64 OE2 GLU 164 57.524 14.848 10.340 1.00 31.39
ATOM 65 C GLU 164 56.165 19.204 6.276 1.00 26.54
ATOM 66 O GLU 164 56.609 20.258 6.724 1.00 32.48
ATOM 67 N TRP 165 56.075 18.957 4.971 1.00 23.41
ATOM 68 CA TRP 165 56.488 19.962 3.998 1.00 20.81
ATOM 69 CB TRP 165 56.462 19.405 2.573 1.00 18.15
ATOM 70 CG TRP 165 57.762 18.747 2.164 1.00 15.80
ATOM 71 CD2 TRP 165 59.058 19.377 2.064 1.00 15.35
ATOM 72 CE2 TRP 165 59.959 18.392 1.628 1.00 12.14
ATOM 73 CE3 TRP 165 59.527 20.676 2.287 1.00 17.56
ATOM 74 CD1 TRP 165 57.939 17.449 1.804 1.00 12.78
ATOM 75 NE1 TRP 165 59.253 17.230 1.484 1.00 16.10
ATOM 76 CZ2 TRP 165 61.318 18.657 1.419 1.00 16.26
ATOM 77 CZ3 TRP 165 60.879 20.944 2.079 1.00 19.52
ATOM 78 CH2 TRP 165 61.760 19.933 1.642 1.00 16.48
ATOM 79 C TRP 165 55.547 21.151 4.109 1.00 19.66
ATOM 80 O TRP 165 55.975 22.295 3.960 1.00 23.61
ATOM 81 N ASP 166 54.269 20.882 4.376 1.00 22.66
ATOM 82 CA ASP 166 53.269 21.943 4.537 1.00 23.35
ATOM 83 CB ASP 166 51.863 21.359 4.716 1.00 22.61
ATOM 84 CG ASP 166 51.347 20.681 3.458 1.00 31.41
ATOM 85 OD1 ASP 166 51.816 21.028 2.360 1.00 26.38
ATOM 86 OD2 ASP 166 50.464 19.803 3.570 1.00 32.25
ATOM 87 C ASP 166 53.631 22.760 5.773 1.00 26.47
ATOM 88 O ASP 166 53.694 23.991 5.718 1.00 30.25
ATOM 89 N LEU 167 53.887 22.054 6.872 1.00 24.12
ATOM 90 CA LEU 167 54.268 22.663 8.139 1.00 26.44
ATOM 91 CB LEU 167 54.596 21.557 9.148 1.00 32.57
ATOM 92 CG LEU 167 54.659 21.919 10.629 1.00 36.97
ATOM 93 CD1 LEU 167 53.289 22.402 11.080 1.00 43.83
ATOM 94 CD2 LEU 167 55.096 20.712 11.448 1.00 34.75
ATOM 95 C LEU 167 55.501 23.533 7.904 1.00 23.19
ATOM 96 O LEU 167 55.570 24.670 8.368 1.00 28.18
ATOM 97 N ILE 168 56.450 22.988 7.147 1.00 19.25

```
ATOM    98  CA  ILE   168      57.703  23.651   6.801  1.00 17.71
ATOM    99  CB  ILE   168      58.632  22.693   6.006  1.00 14.43
ATOM   100  CG2 ILE   168      59.740  23.451   5.304  1.00 16.71
ATOM   101  CG1 ILE   168      59.219  21.644   6.948  1.00 21.24
ATOM   102  CD1 ILE   168      60.063  20.588   6.264  1.00 18.18
ATOM   103  C - ILE   168      57.475  24.931   6.002  1.00 28.73
ATOM   104  O   ILE   168      58.064  25.977   6.307  1.00 29.36
ATOM   105  N   HIS   169      56.601  24.866   5.005  1.00 24.43
ATOM   106  CA  HIS   169      56.319  26.027   4.169  1.00 23.64
ATOM   107  CB  HIS   169      55.459  25.631   2.971  1.00 23.55
ATOM   108  CG  HIS   169      56.140  24.683   2.034  1.00 23.82
ATOM   109  CD2 HIS   169      57.455  24.429   1.824  1.00 19.23
ATOM   110  ND1 HIS   169      55.450  23.833   1.199  1.00 22.92
ATOM   111  CE1 HIS   169      56.302  23.089   0.522  1.00 19.56
ATOM   112  NE2 HIS   169      57.527  23.431   0.883  1.00 26.00
ATOM   113  C   HIS   169      55.653  27.135   4.962  1.00 19.37
ATOM   114  O   HIS   169      56.069  28.288   4.880  1.00 25.64
ATOM   115  N   VAL   170      54.638  26.782   5.745  1.00 19.88
ATOM   116  CA  VAL   170      53.925  27.758   6.555  1.00 20.28
ATOM   117  CB  VAL   170      52.755  27.100   7.330  1.00 26.06
ATOM   118  CG1 VAL   170      52.093  28.109   8.259  1.00 20.15
ATOM   119  CG2 VAL   170      51.725  26.541   6.352  1.00 18.69
ATOM   120  C   VAL   170      54.886  28.442   7.532  1.00 23.11
ATOM   121  O   VAL   170      54.907  29.672   7.625  1.00 28.86
ATOM   122  N   ALA   171      55.716  27.644   8.203  1.00 20.48
ATOM   123  CA  ALA   171      56.686  28.146   9.173  1.00 19.84
ATOM   124  CB  ALA   171      57.365  26.985   9.902  1.00 18.07
ATOM   125  C   ALA   171      57.728  29.049   8.512  1.00 20.62
ATOM   126  O   ALA   171      58.033  30.127   9.037  1.00 24.67
ATOM   127  N   THR   172      58.251  28.632   7.359  1.00 20.65
ATOM   128  CA  THR   172      59.247  29.428   6.640  1.00 18.91
ATOM   129  CB  THR   172      59.755  28.709   5.380  1.00 20.06
ATOM   130  OG1 THR   172      60.267  27.417   5.734  1.00 20.30
ATOM   131  CG2 THR   172      60.877  29.516   4.726  1.00 18.38
ATOM   132  C   THR   172      58.675  30.786   6.235  1.00 24.43
ATOM   133  O   THR   172      59.346  31.815   6.360  1.00 23.54
ATOM   134  N   GLU   173      57.430  30.792   5.766  1.00 24.33
ATOM   135  CA  GLU   173      56.783  32.031   5.361  1.00 25.98
ATOM   136  CB  GLU   173      55.460  31.734   4.651  1.00 28.39
ATOM   137  CG  GLU   173      54.679  32.974   4.207  1.00 40.39
ATOM   138  CD  GLU   173      55.487  33.951   3.347  1.00 48.33
ATOM   139  OE1 GLU   173      55.261  35.172   3.478  1.00 51.86
ATOM   140  OE2 GLU   173      56.334  33.513   2.533  1.00 46.92
ATOM   141  C   GLU   173      56.564  32.953   6.562  1.00 25.57
ATOM   142  O   GLU   173      56.877  34.141   6.498  1.00 27.76
ATOM   143  N   ALA   174      56.071  32.383   7.664  1.00 25.31
ATOM   144  CA  ALA   174      55.823  33.128   8.900  1.00 22.66
```

```
ATOM   145  CB  ALA   174      55.340  32.183  10.000  1.00 18.21
ATOM   146  C   ALA   174      57.097  33.847   9.338  1.00 23.47
ATOM   147  O   ALA   174      57.056  35.003   9.755  1.00 23.76
ATOM   148  N   HIS   175      58.233  33.168   9.226  1.00 22.22
ATOM   149  CA  HIS   175      59.503  33.769   9.592  1.00 20.21
ATOM   150  CB  HIS   175      60.586  32.700   9.738  1.00 13.82
ATOM   151  CG  HIS   175      61.950  33.261   9.984  1.00 20.53
ATOM   152  CD2 HIS   175      62.378  34.221  10.843  1.00 10.04
ATOM   153  ND1 HIS   175      63.054  32.890   9.249  1.00 22.39
ATOM   154  CE1 HIS   175      64.103  33.596   9.640  1.00 13.46
ATOM   155  NE2 HIS   175      63.715  34.410  10.605  1.00 20.86
ATOM   156  C   HIS   175      59.949  34.822   8.571  1.00 25.39
ATOM   157  O   HIS   175      60.370  35.920   8.949  1.00 26.31
ATOM   158  N   ARG   176      59.868  34.494   7.284  1.00 23.17
ATOM   159  CA  ARG   176      60.292  35.423   6.239  1.00 24.26
ATOM   160  CB  ARG   176      60.168  34.767   4.872  1.00 30.31
ATOM   161  CG  ARG   176      61.286  33.793   4.576  1.00 39.36
ATOM   162  CD  ARG   176      61.049  33.139   3.243  1.00 49.23
ATOM   163  NE  ARG   176      62.188  32.346   2.808  1.00 60.62
ATOM   164  CZ  ARG   176      62.230  31.688   1.653  1.00 67.96
ATOM   165  NH1 ARG   176      61.192  31.731   0.823  1.00 68.84
ATOM   166  NH2 ARG   176      63.313  30.999   1.321  1.00 67.97
ATOM   167  C   ARG   176      59.548  36.749   6.267  1.00 23.09
ATOM   168  O   ARG   176      60.163  37.807   6.173  1.00 30.71
ATOM   169  N   SER   177      58.240  36.686   6.488  1.00 22.69
ATOM   170  CA  SER   177      57.416  37.885   6.536  1.00 26.50
ATOM   171  CB  SER   177      55.946  37.520   6.341  1.00 19.42
ATOM   172  OG  SER   177      55.507  36.611   7.331  1.00 27.68
ATOM   173  C   SER   177      57.574  38.695   7.821  1.00 28.70
ATOM   174  O   SER   177      56.986  39.772   7.948  1.00 34.31
ATOM   175  N   THR   178      58.327  38.165   8.786  1.00 27.42
ATOM   176  CA  THR   178      58.540  38.850  10.060  1.00 21.88
ATOM   177  CB  THR   178      57.842  38.107  11.228  1.00 23.73
ATOM   178  OG1 THR   178      58.354  36.776  11.337  1.00 24.26
ATOM   179  CG2 THR   178      56.344  38.037  10.994  1.00 16.77
ATOM   180  C   THR   178      60.027  39.018  10.375  1.00 23.86
ATOM   181  O   THR   178      60.399  39.439  11.474  1.00 24.64
ATOM   182  N   ASN   179      60.873  38.690   9.402  1.00 23.79
ATOM   183  CA  ASN   179      62.315  38.813   9.563  1.00 26.01
ATOM   184  CB  ASN   179      63.018  37.607   8.947  1.00 23.77
ATOM   185  CG  ASN   179      64.451  37.495   9.386  1.00 30.79
ATOM   186  OD1 ASN   179      64.737  37.376  10.575  1.00 36.19
ATOM   187  ND2 ASN   179      65.364  37.516   8.432  1.00 35.34
ATOM   188  C   ASN   179      62.767  40.101   8.875  1.00 32.11
ATOM   189  O   ASN   179      62.947  40.136   7.652  1.00 36.36
ATOM   190  N   ALA   180      62.945  41.153   9.670  1.00 34.40
ATOM   191  CA  ALA   180      63.333  42.473   9.179  1.00 28.75
```

```
ATOM   192  CB  ALA  180      63.653  43.390  10.346  1.00 29.96
ATOM   193  C   ALA  180      64.481  42.481   8.182  1.00 37.02
ATOM   194  O   ALA  180      65.518  41.866   8.414  1.00 41.85
ATOM   195  N   GLN  181      64.266  43.163   7.057  1.00 37.15
ATOM   196  CA  GLN  181      65.261  43.306   5.995  1.00 39.33
ATOM   197  CB  GLN  181      66.572  43.877   6.552  1.00 37.42
ATOM   198  CG  GLN  181      66.420  45.190   7.309  1.00 44.86
ATOM   199  CD  GLN  181      65.779  46.285   6.479  1.00 53.60
ATOM   200  OE1 GLN  181      64.712  46.793   6.821  1.00 58.51
ATOM   201  NE2 GLN  181      66.422  46.650   5.378  1.00 63.36
ATOM   202  C   GLN  181      65.549  42.053   5.164  1.00 44.18
ATOM   203  O   GLN  181      66.367  42.102   4.239  1.00 46.35
ATOM   204  N   GLY  182      64.873  40.949   5.474  1.00 43.76
ATOM   205  CA  GLY  182      65.074  39.713   4.732  1.00 46.26
ATOM   206  C   GLY  182      66.531  39.363   4.477  1.00 49.98
ATOM   207  O   GLY  182      67.309  39.175   5.419  1.00 56.26
ATOM   208  N   SER  183      66.907  39.274   3.205  1.00 50.96
ATOM   209  CA  SER  183      68.281  38.947   2.830  1.00 55.69
ATOM   210  CB  SER  183      68.284  38.024   1.608  1.00 56.52
ATOM   211  OG  SER  183      67.398  38.497   0.609  1.00 60.82
ATOM   212  C   SER  183      69.121  40.197   2.558  1.00 59.84
ATOM   213  O   SER  183      70.352  40.138   2.540  1.00 66.02
ATOM   214  N   HIS  184      68.453  41.338   2.413  1.00 60.68
ATOM   215  CA  HIS  184      69.131  42.600   2.139  1.00 60.01
ATOM   216  CB  HIS  184      68.150  43.596   1.517  1.00 53.49
ATOM   217  C   HIS  184      69.798  43.209   3.380  1.00 59.43
ATOM   218  O   HIS  184      70.373  44.300   3.303  1.00 59.56
ATOM   219  N   TRP  185      69.753  42.500   4.508  1.00 57.54
ATOM   220  CA  TRP  185      70.343  42.995   5.754  1.00 54.25
ATOM   221  CB  TRP  185      70.147  41.988   6.899  1.00 47.54
ATOM   222  CG  TRP  185      70.905  40.692   6.752  1.00 41.08
ATOM   223  CD2 TRP  185      72.233  40.404   7.230  1.00 39.59
ATOM   224  CE2 TRP  185      72.522  39.070   6.874  1.00 30.27
ATOM   225  CE3 TRP  185      73.202  41.146   7.919  1.00 35.23
ATOM   226  CD1 TRP  185      70.462  39.553   6.149  1.00 39.73
ATOM   227  NE1 TRP  185      71.427  38.577   6.219  1.00 40.01
ATOM   228  CZ2 TRP  185      73.740  38.457   7.188  1.00 31.35
ATOM   229  CZ3 TRP  185      74.416  40.535   8.230  1.00 32.76
ATOM   230  CH2 TRP  185      74.673  39.203   7.861  1.00 31.71
ATOM   231  C   TRP  185      71.818  43.382   5.655  1.00 54.21
ATOM   232  O   TRP  185      72.229  44.403   6.200  1.00 52.82
ATOM   233  N   LYS  186      72.605  42.584   4.938  1.00 54.57
ATOM   234  CA  LYS  186      74.034  42.848   4.788  1.00 55.46
ATOM   235  CB  LYS  186      74.712  41.682   4.080  1.00 53.31
ATOM   236  C   LYS  186      74.338  44.160   4.061  1.00 58.96
ATOM   237  O   LYS  186      75.417  44.731   4.226  1.00 62.57
ATOM   238  N   GLN  187      73.382  44.640   3.268  1.00 60.12
```

ATOM 239 CA GLN 187 73.563 45.873 2.512 1.00 60.15
ATOM 240 CB GLN 187 73.157 45.653 1.050 1.00 57.00
ATOM 241 C GLN 187 72.809 47.064 3.101 1.00 60.91
ATOM 242 O GLN 187 73.149 48.213 2.822 1.00 66.50
ATOM 243 N ARG 188 71.795 46.790 3.919 1.00 59.55
ATOM 244 CA ARG 188 70.983 47.847 4.525 1.00 59.26
ATOM 245 CB ARG 188 69.504 47.462 4.466 1.00 55.21
ATOM 246 C ARG 188 71.372 48.243 5.959 1.00 58.97
ATOM 247 O ARG 188 70.914 49.269 6.469 1.00 58.54
ATOM 248 N ARG 189 72.202 47.432 6.607 1.00 55.46
ATOM 249 CA ARG 189 72.630 47.704 7.979 1.00 52.98
ATOM 250 CB ARG 189 73.211 46.437 8.619 1.00 47.73
ATOM 251 CG ARG 189 74.509 45.985 7.989 1.00 47.88
ATOM 252 CD ARG 189 75.080 44.763 8.654 1.00 46.96
ATOM 253 NE ARG 189 76.377 44.441 8.068 1.00 57.93
ATOM 254 CZ ARG 189 77.450 44.090 8.768 1.00 64.81
ATOM 255 NH1 ARG 189 77.385 44.005 10.087 1.00 67.27
ATOM 256 NH2 ARG 189 78.600 43.860 8.148 1.00 67.84
ATOM 257 C ARG 189 73.650 48.838 8.091 1.00 53.48
ATOM 258 O ARG 189 74.513 49.004 7.227 1.00 57.14
ATOM 259 N LYS 190 73.533 49.617 9.161 1.00 51.31
ATOM 260 CA LYS 190 74.444 50.722 9.435 1.00 48.83
ATOM 261 CB LYS 190 73.682 52.036 9.516 1.00 45.36
ATOM 262 C LYS 190 75.101 50.411 10.773 1.00 46.88
ATOM 263 O LYS 190 74.454 49.872 11.675 1.00 48.81
ATOM 264 N PHE 191 76.385 50.724 10.894 1.00 46.98
ATOM 265 CA PHE 191 77.123 50.462 12.125 1.00 44.38
ATOM 266 CB PHE 191 78.630 50.520 11.873 1.00 44.25
ATOM 267 CG PHE 191 79.170 49.336 11.123 1.00 49.51
ATOM 268 CD1 PHE 191 78.828 49.124 9.791 1.00 52.20
ATOM 269 CD2 PHE 191 80.029 48.437 11.748 1.00 47.25
ATOM 270 CE1 PHE 191 79.335 48.031 9.090 1.00 55.86
ATOM 271 CE2 PHE 191 80.542 47.343 11.059 1.00 49.73
ATOM 272 CZ PHE 191 80.195 47.139 9.727 1.00 51.55
ATOM 273 C PHE 191 76.764 51.443 13.233 1.00 46.44
ATOM 274 O PHE 191 76.647 52.645 12.996 1.00 51.28
ATOM 275 N LEU 192 76.567 50.924 14.439 1.00 47.66
ATOM 276 CA LEU 192 76.256 51.776 15.577 1.00 46.44
ATOM 277 CB LEU 192 75.930 50.924 16.808 1.00 38.06
ATOM 278 CG LEU 192 75.527 51.672 18.082 1.00 33.55
ATOM 279 CD1 LEU 192 74.180 52.339 17.871 1.00 28.17
ATOM 280 CD2 LEU 192 75.476 50.717 19.268 1.00 26.95
ATOM 281 C LEU 192 77.524 52.595 15.824 1.00 45.82
ATOM 282 O LEU 192 78.604 52.024 16.008 1.00 41.65
ATOM 283 N PRO 193 77.422 53.936 15.782 1.00 48.88
ATOM 284 CD PRO 193 76.176 54.701 15.577 1.00 47.51
ATOM 285 CA PRO 193 78.560 54.836 15.999 1.00 47.34

```
ATOM   286  CB  PRO   193      77.879  56.162  16.319  1.00 46.04
ATOM   287  CG  PRO   193      76.675  56.126  15.438  1.00 46.24
ATOM   288  C   PRO   193      79.475  54.377  17.137  1.00 49.60
ATOM   289  O   PRO   193      79.000  54.033  18.218  1.00 54.05
ATOM   290  N   ASP   194      80.783  54.383  16.891  1.00 50.63
ATOM   291  CA  ASP   194      81.769  53.951  17.885  1.00 54.57
ATOM   292  CB  ASP   194      83.164  53.965  17.272  1.00 59.28
ATOM   293  CG  ASP   194      83.309  52.952  16.170  1.00 66.39
ATOM   294  OD1 ASP   194      83.057  53.311  14.998  1.00 72.95
ATOM   295  OD2 ASP   194      83.640  51.787  16.486  1.00 69.00
ATOM   296  C   ASP   194      81.769  54.726  19.198  1.00 54.41
ATOM   297  O   ASP   194      82.229  54.221  20.222  1.00 55.27
ATOM   298  N   ASP   195      81.268  55.956  19.168  1.00 57.20
ATOM   299  CA  ASP   195      81.206  56.775  20.371  1.00 59.68
ATOM   300  CB  ASP   195      81.017  58.261  20.006  1.00 62.99
ATOM   301  CG  ASP   195      79.747  58.526  19.187  1.00 71.67
ATOM   302  OD1 ASP   195      78.734  58.956  19.796  1.00 70.17
ATOM   303  OD2 ASP   195      79.782  58.311  17.951  1.00 75.23
ATOM   304  C   ASP   195      80.092  56.289  21.306  1.00 58.39
ATOM   305  O   ASP   195      80.032  56.676  22.474  1.00 59.81
ATOM   306  N   ILE   196      79.245  55.399  20.794  1.00 54.47
ATOM   307  CA  ILE   196      78.141  54.840  21.568  1.00 49.00
ATOM   308  CB  ILE   196      76.839  54.780  20.731  1.00 46.64
ATOM   309  CG2 ILE   196      75.701  54.195  21.560  1.00 42.11
ATOM   310  CG1 ILE   196      76.467  56.184  20.241  1.00 44.23
ATOM   311  CD1 ILE   196      75.214  56.238  19.373  1.00 48.45
ATOM   312  C   ILE   196      78.497  53.436  22.068  1.00 46.22
ATOM   313  O   ILE   196      78.912  52.570  21.298  1.00 42.07
ATOM   314  N   GLY   197      78.357  53.228  23.370  1.00 45.62
ATOM   315  CA  GLY   197      78.658  51.930  23.941  1.00 51.49
ATOM   316  C   GLY   197      80.005  51.832  24.625  1.00 54.64
ATOM   317  O   GLY   197      80.377  50.759  25.092  1.00 49.98
ATOM   318  N   GLN   198      80.726  52.946  24.725  1.00 60.08
ATOM   319  CA  GLN   198      82.039  52.939  25.366  1.00 61.01
ATOM   320  CB  GLN   198      83.082  53.568  24.441  1.00 55.55
ATOM   321  C   GLN   198      82.044  53.633  26.733  1.00 59.57
ATOM   322  O   GLN   198      83.103  54.016  27.232  1.00 61.30
ATOM   323  N   SER   199      80.875  53.738  27.362  1.00 57.27
ATOM   324  CA  SER   199      80.758  54.397  28.665  1.00 50.61
ATOM   325  CB  SER   199      80.276  55.842  28.478  1.00 53.70
ATOM   326  OG  SER   199      81.010  56.508  27.463  1.00 61.92
ATOM   327  C   SER   199      79.848  53.684  29.675  1.00 46.41
ATOM   328  O   SER   199      78.798  54.210  30.060  1.00 41.16
ATOM   329  N   PRO   200      80.222  52.466  30.096  1.00 42.08
ATOM   330  CD  PRO   200      81.349  51.648  29.605  1.00 38.31
ATOM   331  CA  PRO   200      79.409  51.722  31.065  1.00 44.04
ATOM   332  CB  PRO   200      79.941  50.297  30.925  1.00 36.06
```

ATOM 333 CG PRO 200 81.377 50.504 30.583 1.00 37.43
ATOM 334 C PRO 200 79.615 52.270 32.485 1.00 50.91
ATOM 335 O PRO 200 80.629 51.980 33.123 1.00 55.65
ATOM 336 N ILE 201 78.663 53.060 32.975 1.00 55.81
ATOM 337 CA ILE 201 78.781 53.651 34.311 1.00 57.24
ATOM 338 CB ILE 201 78.861 55.192 34.250 1.00 58.40
ATOM 339 CG2 ILE 201 80.218 55.622 33.709 1.00 60.49
ATOM 340 CG1 ILE 201 77.716 55.751 33.404 1.00 62.42
ATOM 341 CD1 ILE 201 77.819 57.234 33.137 1.00 61.68
ATOM 342 C ILE 201 77.728 53.241 35.332 1.00 56.52
ATOM 343 O ILE 201 77.961 53.352 36.537 1.00 60.89
ATOM 344 N VAL 202 76.564 52.794 34.871 1.00 52.76
ATOM 345 CA VAL 202 75.522 52.366 35.802 1.00 47.37
ATOM 346 CB VAL 202 74.117 52.377 35.153 1.00 38.14
ATOM 347 CG1 VAL 202 73.092 51.804 36.117 1.00 30.35
ATOM 348 CG2 VAL 202 73.730 53.798 34.763 1.00 26.69
ATOM 349 C VAL 202 75.885 50.958 36.285 1.00 53.65
ATOM 350 O VAL 202 75.914 50.010 35.500 1.00 55.10
ATOM 351 N SER 203 76.226 50.839 37.561 1.00 59.85
ATOM 352 CA SER 203 76.614 49.556 38.132 1.00 64.58
ATOM 353 CB SER 203 77.209 49.749 39.532 1.00 68.95
ATOM 354 OG SER 203 78.396 50.523 39.483 1.00 74.02
ATOM 355 C SER 203 75.493 48.528 38.197 1.00 61.69
ATOM 356 O SER 203 74.351 48.846 38.535 1.00 63.63
ATOM 357 N MET 204 75.848 47.295 37.859 1.00 57.37
ATOM 358 CA MET 204 74.932 46.162 37.885 1.00 57.54
ATOM 359 CB MET 204 74.847 45.505 36.501 1.00 56.59
ATOM 360 CG MET 204 74.012 46.270 35.489 1.00 44.08
ATOM 361 SD MET 204 72.255 46.228 35.884 1.00 46.62
ATOM 362 CE MET 204 71.775 44.758 35.013 1.00 48.37
ATOM 363 C MET 204 75.522 45.178 38.888 1.00 55.86
ATOM 364 O MET 204 76.746 45.089 39.027 1.00 58.94
ATOM 365 N PRO 205 74.671 44.432 39.607 1.00 55.36
ATOM 366 CD PRO 205 73.203 44.570 39.625 1.00 57.73
ATOM 367 CA PRO 205 75.119 43.453 40.604 1.00 56.82
ATOM 368 CB PRO 205 73.814 43.042 41.295 1.00 59.79
ATOM 369 CG PRO 205 72.769 43.281 40.255 1.00 57.85
ATOM 370 C PRO 205 75.902 42.239 40.083 1.00 57.25
ATOM 371 O PRO 205 75.683 41.118 40.541 1.00 66.28
ATOM 372 N ASP 206 76.822 42.462 39.147 1.00 58.75
ATOM 373 CA ASP 206 77.639 41.389 38.586 1.00 61.09
ATOM 374 CB ASP 206 76.802 40.462 37.685 1.00 66.07
ATOM 375 CG ASP 206 76.158 41.190 36.521 1.00 70.97
ATOM 376 OD1 ASP 206 74.989 41.613 36.662 1.00 76.97
ATOM 377 OD2 ASP 206 76.813 41.322 35.465 1.00 61.12
ATOM 378 C ASP 206 78.865 41.910 37.832 1.00 61.96
ATOM 379 O ASP 206 79.406 41.230 36.957 1.00 65.14

ATOM 380 N GLY 207 79.282 43.130 38.158 1.00 63.00
ATOM 381 CA GLY 207 80.455 43.709 37.522 1.00 64.43
ATOM 382 C GLY 207 80.224 44.467 36.229 1.00 64.81
ATOM 383 O GLY 207 80.649 45.619 36.110 1.00 68.76
ATOM 384 N ASP 208 79.584 43.827 35.253 1.00 63.53
ATOM 385 CA ASP 208 79.316 44.459 33.962 1.00 58.96
ATOM 386 CB ASP 208 78.746 43.434 32.974 1.00 62.84
ATOM 387 CG ASP 208 79.743 42.336 32.633 1.00 64.73
ATOM 388 OD1 ASP 208 79.575 41.200 33.121 1.00 66.65
ATOM 389 OD2 ASP 208 80.701 42.610 31.878 1.00 68.91
ATOM 390 C ASP 208 78.368 45.646 34.110 1.00 56.65
ATOM 391 O ASP 208 77.182 45.473 34.392 1.00 55.79
ATOM 392 N LYS 209 78.911 46.852 33.953 1.00 54.66
ATOM 393 CA LYS 209 78.132 48.081 34.082 1.00 53.92
ATOM 394 CB LYS 209 79.034 49.236 34.515 1.00 49.71
ATOM 395 C LYS 209 77.395 48.420 32.785 1.00 48.30
ATOM 396 O LYS 209 77.767 47.945 31.711 1.00 45.62
ATOM 397 N VAL 210 76.367 49.258 32.894 1.00 43.87
ATOM 398 CA VAL 210 75.539 49.662 31.757 1.00 41.25
ATOM 399 CB VAL 210 74.020 49.624 32.125 1.00 32.99
ATOM 400 CG1 VAL 210 73.153 50.029 30.937 1.00 31.44
ATOM 401 CG2 VAL 210 73.626 48.239 32.604 1.00 27.57
ATOM 402 C VAL 210 75.868 51.061 31.234 1.00 43.30
ATOM 403 O VAL 210 76.261 51.951 31.994 1.00 44.65
ATOM 404 N ASP 211 75.688 51.235 29.931 1.00 43.23
ATOM 405 CA ASP 211 75.906 52.498 29.240 1.00 40.62
ATOM 406 CB ASP 211 76.686 52.232 27.943 1.00 43.49
ATOM 407 CG ASP 211 77.014 53.499 27.161 1.00 40.77
ATOM 408 OD1 ASP 211 76.180 54.427 27.092 1.00 42.13
ATOM 409 OD2 ASP 211 78.111 53.549 26.574 1.00 37.49
ATOM 410 C ASP 211 74.491 53.001 28.921 1.00 44.56
ATOM 411 O ASP 211 73.849 52.500 27.998 1.00 46.44
ATOM 412 N LEU 212 74.006 53.982 29.684 1.00 43.76
ATOM 413 CA LEU 212 72.662 54.538 29.494 1.00 41.47
ATOM 414 CB LEU 212 72.473 55.785 30.359 1.00 40.45
ATOM 415 CG LEU 212 72.360 55.585 31.867 1.00 44.47
ATOM 416 CD1 LEU 212 72.127 56.923 32.551 1.00 40.49
ATOM 417 CD2 LEU 212 71.217 54.634 32.153 1.00 45.94
ATOM 418 C LEU 212 72.325 54.886 28.049 1.00 40.77
ATOM 419 O LEU 212 71.254 54.540 27.548 1.00 42.25
ATOM 420 N GLU 213 73.241 55.588 27.394 1.00 42.53
ATOM 421 CA GLU 213 73.068 56.008 26.009 1.00 43.60
ATOM 422 CB GLU 213 74.267 56.860 25.598 1.00 43.84
ATOM 423 CG GLU 213 74.246 57.334 24.167 1.00 51.70
ATOM 424 CD GLU 213 75.598 57.848 23.722 1.00 59.23
ATOM 425 OE1 GLU 213 75.655 58.939 23.121 1.00 60.14
ATOM 426 OE2 GLU 213 76.611 57.158 23.980 1.00 64.78

```
ATOM   427  C   GLU  213      72.913  54.810  25.066  1.00 42.63
ATOM   428  O   GLU  213      72.008  54.779  24.226  1.00 37.04
ATOM   429  N   ALA  214      73.775  53.814  25.245  1.00 39.28
ATOM   430  CA  ALA  214      73.753  52.605  24.424  1.00 39.52
ATOM   431  CB  ALA  214      74.952  51.726  24.740  1.00 35.16
ATOM   432  C   ALA  214      72.460  51.852  24.694  1.00 37.14
ATOM   433  O   ALA  214      71.795  51.390  23.767  1.00 42.29
ATOM   434  N   PHE  215      72.098  51.773  25.970  1.00 31.60
ATOM   435  CA  PHE  215      70.883  51.102  26.404  1.00 31.67
ATOM   436  CB  PHE  215      70.728  51.217  27.922  1.00 24.80
ATOM   437  CG  PHE  215      69.512  50.522  28.458  1.00 21.78
ATOM   438  CD1 PHE  215      69.553  49.171  28.771  1.00 24.64
ATOM   439  CD2 PHE  215      68.328  51.223  28.658  1.00 21.53
ATOM   440  CE1 PHE  215      68.429  48.528  29.277  1.00 27.63
ATOM   441  CE2 PHE  215      67.200  50.591  29.163  1.00 21.60
ATOM   442  CZ  PHE  215      67.249  49.242  29.472  1.00 21.35
ATOM   443  C   PHE  215      69.675  51.706  25.694  1.00 35.75
ATOM   444  O   PHE  215      68.838  50.975  25.161  1.00 34.84
ATOM   445  N   SER  216      69.604  53.035  25.665  1.00 39.09
ATOM   446  CA  SER  216      68.506  53.739  25.001  1.00 40.61
ATOM   447  CB  SER  216      68.668  55.249  25.165  1.00 43.86
ATOM   448  OG  SER  216      68.616  55.603  26.537  1.00 68.66
ATOM   449  C   SER  216      68.444  53.380  23.518  1.00 40.76
ATOM   450  O   SER  216      67.362  53.161  22.969  1.00 35.50
ATOM   451  N   GLU  217      69.611  53.332  22.878  1.00 38.37
ATOM   452  CA  GLU  217      69.709  52.989  21.462  1.00 37.80
ATOM   453  CB  GLU  217      71.164  53.049  20.997  1.00 39.67
ATOM   454  CG  GLU  217      71.701  54.461  20.880  1.00 46.65
ATOM   455  CD  GLU  217      70.881  55.315  19.925  1.00 53.25
ATOM   456  OE1 GLU  217      70.920  55.056  18.702  1.00 57.12
ATOM   457  OE2 GLU  217      70.189  56.240  20.400  1.00 54.13
ATOM   458  C   GLU  217      69.135  51.598  21.209  1.00 38.48
ATOM   459  O   GLU  217      68.416  51.378  20.228  1.00 43.00
ATOM   460  N   PHE  218      69.426  50.677  22.120  1.00 35.49
ATOM   461  CA  PHE  218      68.934  49.313  22.018  1.00 31.76
ATOM   462  CB  PHE  218      69.743  48.392  22.925  1.00 29.10
ATOM   463  CG  PHE  218      71.169  48.260  22.510  1.00 26.25
ATOM   464  CD1 PHE  218      72.176  48.177  23.459  1.00 24.59
ATOM   465  CD2 PHE  218      71.510  48.233  21.163  1.00 23.53
ATOM   466  CE1 PHE  218      73.504  48.072  23.073  1.00 27.68
ATOM   467  CE2 PHE  218      72.832  48.128  20.765  1.00 25.37
ATOM   468  CZ  PHE  218      73.834  48.047  21.721  1.00 28.43
ATOM   469  C   PHE  218      67.445  49.202  22.321  1.00 31.30
ATOM   470  O   PHE  218      66.726  48.496  21.621  1.00 35.18
ATOM   471  N   THR  219      66.967  49.915  23.333  1.00 30.54
ATOM   472  CA  THR  219      65.552  49.853  23.675  1.00 33.53
ATOM   473  CB  THR  219      65.269  50.467  25.057  1.00 36.07
```

ATOM 474 OG1 THR 219 65.903 51.746 25.157 1.00 42.99
ATOM 475 CG2 THR 219 65.797 49.562 26.145 1.00 34.32
ATOM 476 C THR 219 64.680 50.514 22.609 1.00 34.53
ATOM 477 O THR 219 63.507 50.162 22.450 1.00 36.57
ATOM 478 N LYS 220 65.267 51.457 21.873 1.00 38.13
ATOM 479 CA LYS 220 64.563 52.158 20.806 1.00 41.42
ATOM 480 CB LYS 220 65.452 53.257 20.208 1.00 41.62
ATOM 481 C LYS 220 64.140 51.182 19.716 1.00 41.80
ATOM 482 O LYS 220 63.032 51.274 19.192 1.00 43.29
ATOM 483 N ILE 221 65.018 50.234 19.393 1.00 36.93
ATOM 484 CA ILE 221 64.726 49.250 18.355 1.00 37.33
ATOM 485 CB ILE 221 65.965 48.932 17.482 1.00 33.71
ATOM 486 CG2 ILE 221 66.491 50.202 16.826 1.00 41.26
ATOM 487 CG1 ILE 221 67.042 48.235 18.309 1.00 30.36
ATOM 488 CD1 ILE 221 68.178 47.687 17.472 1.00 26.28
ATOM 489 C ILE 221 64.141 47.922 18.845 1.00 40.49
ATOM 490 O ILE 221 63.593 47.159 18.048 1.00 43.43
ATOM 491 N ILE 222 64.219 47.651 20.144 1.00 39.43
ATOM 492 CA ILE 222 63.703 46.394 20.667 1.00 35.49
ATOM 493 CB ILE 222 64.169 46.133 22.130 1.00 34.06
ATOM 494 CG2 ILE 222 63.287 46.881 23.130 1.00 26.15
ATOM 495 CG1 ILE 222 64.155 44.627 22.405 1.00 34.08
ATOM 496 CD1 ILE 222 64.760 44.220 23.719 1.00 33.67
ATOM 497 C ILE 222 62.186 46.230 20.539 1.00 37.60
ATOM 498 O ILE 222 61.703 45.127 20.279 1.00 42.14
ATOM 499 N THR 223 61.438 47.324 20.665 1.00 34.60
ATOM 500 CA THR 223 59.979 47.257 20.562 1.00 35.96
ATOM 501 CB THR 223 59.323 48.645 20.799 1.00 41.70
ATOM 502 OG1 THR 223 59.681 49.119 22.106 1.00 44.59
ATOM 503 CG2 THR 223 57.796 48.548 20.706 1.00 42.58
ATOM 504 C THR 223 59.478 46.614 19.252 1.00 34.77
ATOM 505 O THR 223 58.671 45.680 19.289 1.00 30.60
ATOM 506 N PRO 224 59.942 47.103 18.084 1.00 31.99
ATOM 507 CD PRO 224 60.784 48.288 17.839 1.00 30.37
ATOM 508 CA PRO 224 59.496 46.517 16.815 1.00 29.25
ATOM 509 CB PRO 224 60.225 47.366 15.769 1.00 29.27
ATOM 510 CG PRO 224 60.393 48.677 16.441 1.00 36.31
ATOM 511 C PRO 224 59.913 45.050 16.723 1.00 29.20
ATOM 512 O PRO 224 59.146 44.209 16.251 1.00 33.73
ATOM 513 N ALA 225 61.124 44.754 17.192 1.00 19.86
ATOM 514 CA ALA 225 61.663 43.395 17.175 1.00 19.61
ATOM 515 CB ALA 225 63.086 43.388 17.730 1.00 19.08
ATOM 516 C ALA 225 60.777 42.428 17.960 1.00 20.48
ATOM 517 O ALA 225 60.474 41.331 17.489 1.00 24.33
ATOM 518 N ILE 226 60.330 42.847 19.141 1.00 23.72
ATOM 519 CA ILE 226 59.471 42.001 19.972 1.00 21.94
ATOM 520 CB ILE 226 59.152 42.667 21.333 1.00 21.01

ATOM 521 CG2 ILE 226 58.118 41.846 22.095 1.00 15.14
ATOM 522 CG1 ILE 226 60.425 42.841 22.163 1.00 20.45
ATOM 523 CD1 ILE 226 60.216 43.741 23.358 1.00 17.65
ATOM 524 C ILE 226 58.165 41.758 19.228 1.00 24.04
ATOM 525 O ILE 226 57.640 40.642 19.220 1.00 26.92
ATOM 526 N THR 227 57.653 42.811 18.596 1.00 25.22
ATOM 527 CA THR 227 56.410 42.730 17.836 1.00 27.92
ATOM 528 CB THR 227 55.984 44.132 17.333 1.00 34.33
ATOM 529 OG1 THR 227 55.823 45.007 18.458 1.00 33.62
ATOM 530 CG2 THR 227 54.669 44.061 16.563 1.00 39.18
ATOM 531 C THR 227 56.524 41.733 16.671 1.00 23.61
ATOM 532 O THR 227 55.587 40.977 16.413 1.00 24.41
ATOM 533 N ARG 228 57.670 41.704 15.995 1.00 15.49
ATOM 534 CA ARG 228 57.872 40.773 14.885 1.00 17.92
ATOM 535 CB ARG 228 59.174 41.075 14.137 1.00 19.84
ATOM 536 CG ARG 228 59.203 42.437 13.452 1.00 20.62
ATOM 537 CD ARG 228 60.351 42.523 12.453 1.00 24.29
ATOM 538 NE ARG 228 61.641 42.168 13.047 1.00 27.04
ATOM 539 CZ ARG 228 62.452 43.039 13.642 1.00 37.92
ATOM 540 NH1 ARG 228 62.113 44.327 13.725 1.00 42.82
ATOM 541 NH2 ARG 228 63.618 42.634 14.136 1.00 34.80
ATOM 542 C ARG 228 57.870 39.323 15.387 1.00 22.51
ATOM 543 O ARG 228 57.402 38.421 14.686 1.00 28.49
ATOM 544 N VAL 229 58.362 39.104 16.607 1.00 21.46
ATOM 545 CA VAL 229 58.372 37.762 17.187 1.00 20.12
ATOM 546 CB VAL 229 59.149 37.707 18.524 1.00 17.21
ATOM 547 CG1 VAL 229 59.023 36.322 19.152 1.00 13.73
ATOM 548 CG2 VAL 229 60.611 38.019 18.287 1.00 15.80
ATOM 549 C VAL 229 56.926 37.348 17.421 1.00 19.19
ATOM 550 O VAL 229 56.528 36.224 17.089 1.00 19.86
ATOM 551 N VAL 230 56.134 38.275 17.953 1.00 21.49
ATOM 552 CA VAL 230 54.721 38.023 18.217 1.00 17.69
ATOM 553 CB VAL 230 54.041 39.239 18.881 1.00 21.30
ATOM 554 CG1 VAL 230 52.568 38.952 19.090 1.00 17.26
ATOM 555 CG2 VAL 230 54.706 39.572 20.218 1.00 17.13
ATOM 556 C VAL 230 54.003 37.707 16.902 1.00 26.39
ATOM 557 O VAL 230 53.180 36.790 16.843 1.00 29.63
ATOM 558 N ASP 231 54.333 38.451 15.848 1.00 25.52
ATOM 559 CA ASP 231 53.724 38.242 14.537 1.00 26.78
ATOM 560 CB ASP 231 54.132 39.353 13.571 1.00 23.70
ATOM 561 CG ASP 231 53.649 40.728 14.012 1.00 31.60
ATOM 562 OD1 ASP 231 52.656 40.820 14.771 1.00 31.79
ATOM 563 OD2 ASP 231 54.271 41.727 13.593 1.00 35.74
ATOM 564 C ASP 231 54.108 36.879 13.970 1.00 27.69
ATOM 565 O ASP 231 53.279 36.196 13.366 1.00 25.15
ATOM 566 N PHE 232 55.364 36.490 14.170 1.00 22.29
ATOM 567 CA PHE 232 55.858 35.200 13.703 1.00 23.78

```
ATOM   568  CB  PHE   232      57.328  35.008  14.097  1.00 24.76
ATOM   569  CG  PHE   232      57.794  33.581  14.017  1.00 25.63
ATOM   570  CD1 PHE   232      58.000  32.967  12.785  1.00 24.50
ATOM   571  CD2 PHE   232      57.980  32.830  15.181  1.00 19.35
ATOM   572  CE1 PHE   232      58.381  31.630  12.705  1.00 22.27
ATOM   573  CE2 PHE   232      58.359  31.496  15.114  1.00 20.63
ATOM   574  CZ  PHE   232      58.561  30.893  13.873  1.00 26.10
ATOM   575  C   PHE   232      55.018  34.093  14.328  1.00 23.51
ATOM   576  O   PHE   232      54.541  33.189  13.637  1.00 22.39
ATOM   577  N   ALA   233      54.837  34.182  15.644  1.00 24.55
ATOM   578  CA  ALA   233      54.070  33.192  16.387  1.00 23.10
ATOM   579  CB  ALA   233      54.145  33.490  17.869  1.00 17.99
ATOM   580  C   ALA   233      52.616  33.137  15.929  1.00 27.99
ATOM   581  O   ALA   233      52.063  32.051  15.744  1.00 25.71
ATOM   582  N   LYS   234      51.997  34.305  15.760  1.00 30.19
ATOM   583  CA  LYS   234      50.601  34.380  15.325  1.00 31.58
ATOM   584  CB  LYS   234      50.136  35.838  15.229  1.00 30.40
ATOM   585  CG  LYS   234      50.100  36.593  16.555  1.00 37.97
ATOM   586  CD  LYS   234      49.151  35.947  17.569  1.00 53.64
ATOM   587  CE  LYS   234      47.694  35.958  17.101  1.00 59.60
ATOM   588  NZ  LYS   234      46.773  35.268  18.060  1.00 54.22
ATOM   589  C   LYS   234      50.388  33.686  13.978  1.00 30.35
ATOM   590  O   LYS   234      49.318  33.142  13.716  1.00 32.50
ATOM   591  N   LYS   235      51.425  33.687  13.144  1.00 23.98
ATOM   592  CA  LYS   235      51.351  33.071  11.828  1.00 22.75
ATOM   593  CB  LYS   235      52.353  33.737  10.896  1.00 23.12
ATOM   594  CG  LYS   235      51.997  35.181  10.631  1.00 20.88
ATOM   595  CD  LYS   235      52.982  35.836   9.688  1.00 26.50
ATOM   596  CE  LYS   235      52.512  37.227   9.310  1.00 31.33
ATOM   597  NZ  LYS   235      53.439  37.862   8.341  1.00 36.51
ATOM   598  C   LYS   235      51.508  31.554  11.791  1.00 28.37
ATOM   599  O   LYS   235      51.491  30.948  10.721  1.00 29.62
ATOM   600  N   LEU   236      51.700  30.943  12.954  1.00 33.22
ATOM   601  CA  LEU   236      51.828  29.494  13.036  1.00 32.24
ATOM   602  CB  LEU   236      52.911  29.101  14.043  1.00 26.25
ATOM   603  CG  LEU   236      54.327  29.582  13.730  1.00 23.40
ATOM   604  CD1 LEU   236      55.289  29.113  14.806  1.00 20.52
ATOM   605  CD2 LEU   236      54.750  29.054  12.374  1.00 20.29
ATOM   606  C   LEU   236      50.470  28.984  13.502  1.00 37.08
ATOM   607  O   LEU   236      50.013  29.342  14.588  1.00 34.23
ATOM   608  N   PRO   237      49.811  28.134  12.695  1.00 44.89
ATOM   609  CD  PRO   237      50.351  27.597  11.432  1.00 42.95
ATOM   610  CA  PRO   237      48.491  27.556  12.990  1.00 48.88
ATOM   611  CB  PRO   237      48.396  26.406  11.987  1.00 51.40
ATOM   612  CG  PRO   237      49.142  26.931  10.813  1.00 53.54
ATOM   613  C   PRO   237      48.278  27.072  14.430  1.00 49.12
ATOM   614  O   PRO   237      47.387  27.551  15.133  1.00 48.18
```

```
ATOM   615  N   MET   238     49.104  26.126  14.860  1.00 45.79
ATOM   616  CA  MET   238     49.029  25.558  16.200  1.00 52.79
ATOM   617  CB  MET   238     50.133  24.505  16.378  1.00 49.72
ATOM   618  CG  MET   238     49.861  23.195  15.637  1.00 58.16
ATOM   619  SD  MET   238     51.342  22.205  15.284  1.00 60.11
ATOM   620  CE  MET   238     50.993  21.626  13.625  1.00 53.03
ATOM   621  C   MET   238     49.103  26.593  17.324  1.00 53.36
ATOM   622  O   MET   238     48.583  26.365  18.420  1.00 58.87
ATOM   623  N   PHE   239     49.713  27.742  17.043  1.00 48.09
ATOM   624  CA  PHE   239     49.861  28.793  18.045  1.00 41.38
ATOM   625  CB  PHE   239     51.011  29.736  17.677  1.00 32.92
ATOM   626  CG  PHE   239     51.307  30.763  18.734  1.00 31.32
ATOM   627  CD1 PHE   239     52.162  30.462  19.790  1.00 28.28
ATOM   628  CD2 PHE   239     50.715  32.024  18.689  1.00 24.80
ATOM   629  CE1 PHE   239     52.425  31.402  20.790  1.00 29.45
ATOM   630  CE2 PHE   239     50.970  32.973  19.682  1.00 32.29
ATOM   631  CZ  PHE   239     51.828  32.659  20.737  1.00 26.00
ATOM   632  C   PHE   239     48.590  29.592  18.344  1.00 37.40
ATOM   633  O   PHE   239     48.194  29.696  19.501  1.00 33.32
ATOM   634  N   SER   240     47.958  30.166  17.321  1.00 36.32
ATOM   635  CA  SER   240     46.745  30.959  17.529  1.00 39.00
ATOM   636  CB  SER   240     46.385  31.724  16.258  1.00 47.52
ATOM   637  OG  SER   240     47.390  32.671  15.947  1.00 52.67
ATOM   638  C   SER   240     45.539  30.158  18.032  1.00 36.82
ATOM   639  O   SER   240     44.548  30.743  18.485  1.00 43.02
ATOM   640  N   GLU   241     45.617  28.833  17.931  1.00 38.98
ATOM   641  CA  GLU   241     44.554  27.954  18.408  1.00 40.35
ATOM   642  CB  GLU   241     44.788  26.521  17.926  1.00 49.38
ATOM   643  CG  GLU   241     44.541  26.287  16.452  1.00 65.25
ATOM   644  CD  GLU   241     44.873  24.856  16.002  1.00 70.72
ATOM   645  OE1 GLU   241     44.806  23.923  16.845  1.00 73.36
ATOM   646  OE2 GLU   241     45.211  24.679  14.805  1.00 68.60
ATOM   647  C   GLU   241     44.550  27.968  19.934  1.00 37.83
ATOM   648  O   GLU   241     43.504  27.857  20.570  1.00 40.77
ATOM   649  N   LEU   242     45.747  28.103  20.498  1.00 34.71
ATOM   650  CA  LEU   242     45.974  28.132  21.944  1.00 31.77
ATOM   651  CB  LEU   242     47.478  28.240  22.215  1.00 24.87
ATOM   652  CG  LEU   242     48.345  27.006  22.455  1.00 30.51
ATOM   653  CD1 LEU   242     47.814  25.763  21.772  1.00 31.72
ATOM   654  CD2 LEU   242     49.743  27.328  21.996  1.00 24.25
ATOM   655  C   LEU   242     45.274  29.287  22.657  1.00 29.41
ATOM   656  O   LEU   242     45.029  30.339  22.071  1.00 28.12
ATOM   657  N   PRO   243     44.913  29.089  23.938  1.00 32.37
ATOM   658  CD  PRO   243     44.976  27.849  24.728  1.00 27.94
ATOM   659  CA  PRO   243     44.253  30.165  24.685  1.00 33.92
ATOM   660  CB  PRO   243     44.041  29.537  26.065  1.00 29.41
ATOM   661  CG  PRO   243     43.929  28.072  25.775  1.00 30.77
```

ATOM 662 C PRO 243 45.246 31.334 24.775 1.00 35.86
ATOM 663 O PRO 243 46.461 31.110 24.809 1.00 38.79
ATOM 664 N CYS 244 44.751 32.570 24.834 1.00 39.67
ATOM 665 CA CYS 244 45.621 33.749 24.931 1.00 45.78
ATOM 666 CB CYS 244 44.788 35.028 25.102 1.00 71.13
ATOM 667 SG CYS 244 44.068 35.680 23.580 1.00100.76
ATOM 669 C CYS 244 46.660 33.665 26.051 1.00 40.08
ATOM 670 O CYS 244 47.797 34.096 25.879 1.00 35.68
ATOM 671 N GLU 245 46.265 33.088 27.184 1.00 34.25
ATOM 672 CA GLU 245 47.156 32.939 28.337 1.00 34.60
ATOM 673 CB GLU 245 46.426 32.296 29.524 1.00 42.20
ATOM 674 CG GLU 245 45.356 33.171 30.160 1.00 41.92
ATOM 675 CD GLU 245 43.947 32.808 29.730 1.00 39.68
ATOM 676 OE1 GLU 245 43.080 32.693 30.618 1.00 38.31
ATOM 677 OE2 GLU 245 43.697 32.644 28.516 1.00 48.13
ATOM 678 C GLU 245 48.376 32.109 27.984 1.00 29.54
ATOM 679 O GLU 245 49.497 32.437 28.381 1.00 33.54
ATOM 680 N ASP 246 48.146 31.034 27.236 1.00 26.40
ATOM 681 CA ASP 246 49.219 30.154 26.794 1.00 26.99
ATOM 682 CB ASP 246 48.650 28.887 26.153 1.00 29.86
ATOM 683 CG ASP 246 48.184 27.876 27.175 1.00 34.10
ATOM 684 OD1 ASP 246 48.149 28.199 28.381 1.00 31.83
ATOM 685 OD2 ASP 246 47.863 26.742 26.772 1.00 35.79
ATOM 686 C ASP 246 50.103 30.875 25.790 1.00 28.07
ATOM 687 O ASP 246 51.331 30.789 25.863 1.00 27.35
ATOM 688 N GLN 247 49.472 31.577 24.851 1.00 25.53
ATOM 689 CA GLN 247 50.198 32.327 23.829 1.00 26.08
ATOM 690 CB GLN 247 49.228 33.089 22.924 1.00 23.38
ATOM 691 CG GLN 247 48.303 32.213 22.091 1.00 23.76
ATOM 692 CD GLN 247 47.429 33.029 21.151 1.00 26.89
ATOM 693 OE1 GLN 247 47.853 34.054 20.628 1.00 33.51
ATOM 694 NE2 GLN 247 46.198 32.593 20.957 1.00 27.44
ATOM 695 C GLN 247 51.133 33.313 24.511 1.00 22.74
ATOM 696 O GLN 247 52.326 33.373 24.205 1.00 27.63
ATOM 697 N ILE 248 50.588 34.047 25.473 1.00 25.03
ATOM 698 CA ILE 248 51.353 35.035 26.220 1.00 25.94
ATOM 699 CB ILE 248 50.436 35.781 27.226 1.00 24.84
ATOM 700 CG2 ILE 248 51.251 36.633 28.179 1.00 21.87
ATOM 701 CG1 ILE 248 49.430 36.652 26.459 1.00 27.98
ATOM 702 CD1 ILE 248 48.359 37.298 27.328 1.00 29.90
ATOM 703 C ILE 248 52.535 34.382 26.939 1.00 27.53
ATOM 704 O ILE 248 53.671 34.847 26.833 1.00 29.35
ATOM 705 N ILE 249 52.279 33.274 27.622 1.00 24.38
ATOM 706 CA ILE 249 53.334 32.582 28.354 1.00 26.26
ATOM 707 CB ILE 249 52.759 31.395 29.166 1.00 29.81
ATOM 708 CG2 ILE 249 53.874 30.521 29.726 1.00 29.16
ATOM 709 CG1 ILE 249 51.883 31.923 30.300 1.00 27.15

ATOM 710 CD1 ILE 249 51.173 30.838 31.076 1.00 32.35
ATOM 711 C ILE 249 54.448 32.103 27.422 1.00 27.78
ATOM 712 O ILE 249 55.634 32.297 27.708 1.00 29.37
ATOM 713 N LEU 250 54.061 31.516 26.289 1.00 29.25
ATOM 714 CA LEU 250 55.021 31.005 25.319 1.00 24.49
ATOM 715 CB LEU 250 54.303 30.224 24.214 1.00 23.75
ATOM 716 CG LEU 250 53.541 28.962 24.629 1.00 23.18
ATOM 717 CD1 LEU 250 52.886 28.353 23.416 1.00 19.94
ATOM 718 CD2 LEU 250 54.475 27.960 25.278 1.00 20.76
ATOM 719 C LEU 250 55.878 32.116 24.714 1.00 22.20
ATOM 720 O LEU 250 57.082 31.940 24.528 1.00 23.49
ATOM 721 N LEU 251 55.256 33.249 24.399 1.00 24.21
ATOM 722 CA LEU 251 55.980 34.384 23.831 1.00 27.98
ATOM 723 CB LEU 251 55.010 35.488 23.408 1.00 25.91
ATOM 724 CG LEU 251 54.287 35.245 22.085 1.00 29.46
ATOM 725 CD1 LEU 251 53.121 36.217 21.939 1.00 35.03
ATOM 726 CD2 LEU 251 55.268 35.364 20.924 1.00 23.65
ATOM 727 C LEU 251 56.998 34.931 24.828 1.00 26.85
ATOM 728 O LEU 251 58.165 35.143 24.484 1.00 23.12
ATOM 729 N LYS 252 56.556 35.145 26.063 1.00 25.33
ATOM 730 CA LYS 252 57.427 35.644 27.119 1.00 31.33
ATOM 731 CB LYS 252 56.659 35.723 28.437 1.00 37.06
ATOM 732 CG LYS 252 55.593 36.805 28.511 1.00 41.75
ATOM 733 CD LYS 252 54.779 36.619 29.783 1.00 52.64
ATOM 734 CE LYS 252 53.822 37.767 30.057 1.00 62.60
ATOM 735 NZ LYS 252 54.503 39.005 30.520 1.00 71.68
ATOM 736 C LYS 252 58.622 34.705 27.293 1.00 29.08
ATOM 737 O LYS 252 59.758 35.150 27.460 1.00 35.24
ATOM 738 N GLY 253 58.355 33.403 27.211 1.00 24.98
ATOM 739 CA GLY 253 59.407 32.416 27.369 1.00 22.80
ATOM 740 C GLY 253 60.413 32.282 26.235 1.00 26.90
ATOM 741 O GLY 253 61.572 31.948 26.489 1.00 31.90
ATOM 742 N CYS 254 60.013 32.574 24.997 1.00 25.42
ATOM 743 CA CYS 254 60.932 32.427 23.863 1.00 20.71
ATOM 744 CB CYS 254 60.314 31.509 22.811 1.00 24.98
ATOM 745 SG CYS 254 58.976 32.310 21.909 1.00 24.24
ATOM 746 C CYS 254 61.353 33.716 23.164 1.00 22.79
ATOM 747 O CYS 254 62.217 33.683 22.282 1.00 23.23
ATOM 748 N CYS 255 60.757 34.842 23.539 1.00 21.47
ATOM 749 CA CYS 255 61.061 36.114 22.884 1.00 22.50
ATOM 750 CB CYS 255 60.318 37.262 23.567 1.00 21.72
ATOM 751 SG CYS 255 60.353 38.768 22.597 1.00 24.73
ATOM 752 C CYS 255 62.547 36.457 22.738 1.00 23.81
ATOM 753 O CYS 255 63.015 36.746 21.632 1.00 23.48
ATOM 754 N MET 256 63.294 36.402 23.838 1.00 22.13
ATOM 755 CA MET 256 64.719 36.713 23.792 1.00 22.91
ATOM 756 CB MET 256 65.286 36.810 25.213 1.00 23.78

ATOM 757 CG MET 256 66.781 37.094 25.272 1.00 17.41
ATOM 758 SD MET 256 67.196 38.632 24.415 1.00 23.65
ATOM 759 CE MET 256 69.010 38.715 24.624 1.00 18.57
ATOM 760 C MET 256 65.487 35.671 22.980 1.00 21.41
ATOM 761 O MET 256 66.432 36.005 22.260 1.00 22.01
ATOM 762 N GLU 257 65.058 34.415 23.068 1.00 23.18
ATOM 763 CA GLU 257 65.705 33.323 22.345 1.00 22.90
ATOM 764 CB GLU 257 65.085 31.989 22.753 1.00 24.00
ATOM 765 CG GLU 257 65.522 31.521 24.125 1.00 33.44
ATOM 766 CD GLU 257 64.564 30.527 24.735 1.00 38.03
ATOM 767 OE1 GLU 257 63.977 29.705 24.000 1.00 45.59
ATOM 768 OE2 GLU 257 64.385 30.577 25.965 1.00 45.75
ATOM 769 C GLU 257 65.595 33.526 20.840 1.00 21.68
ATOM 770 O GLU 257 66.586 33.421 20.107 1.00 20.02
ATOM 771 N ILE 258 64.383 33.852 20.391 1.00 17.07
ATOM 772 CA ILE 258 64.135 34.090 18.973 1.00 17.01
ATOM 773 CB ILE 258 62.613 34.207 18.684 1.00 17.33
ATOM 774 CG2 ILE 258 62.369 34.758 17.276 1.00 15.91
ATOM 775 CG1 ILE 258 61.952 32.831 18.885 1.00 16.69
ATOM 776 CD1 ILE 258 60.450 32.783 18.632 1.00 16.31
ATOM 777 C ILE 258 64.911 35.324 18.501 1.00 17.65
ATOM 778 O ILE 258 65.605 35.263 17.484 1.00 22.58
ATOM 779 N MET 259 64.865 36.410 19.274 1.00 20.17
ATOM 780 CA MET 259 65.584 37.628 18.909 1.00 15.03
ATOM 781 CB MET 259 65.234 38.771 19.856 1.00 20.12
ATOM 782 CG MET 259 63.791 39.191 19.775 1.00 17.19
ATOM 783 SD MET 259 63.523 40.795 20.524 1.00 28.92
ATOM 784 CE MET 259 63.718 40.406 22.261 1.00 19.58
ATOM 785 C MET 259 67.090 37.402 18.884 1.00 18.84
ATOM 786 O MET 259 67.783 37.912 17.996 1.00 29.07
ATOM 787 N SER 260 67.590 36.618 19.837 1.00 21.45
ATOM 788 CA SER 260 69.019 36.319 19.906 1.00 18.71
ATOM 789 CB SER 260 69.367 35.595 21.207 1.00 18.35
ATOM 790 OG SER 260 69.128 36.421 22.329 1.00 25.42
ATOM 791 C SER 260 69.430 35.469 18.709 1.00 17.83
ATOM 792 O SER 260 70.497 35.673 18.131 1.00 22.97
ATOM 793 N LEU 261 68.572 34.522 18.331 1.00 21.66
ATOM 794 CA LEU 261 68.837 33.663 17.179 1.00 20.98
ATOM 795 CB LEU 261 67.739 32.608 17.053 1.00 22.66
ATOM 796 CG LEU 261 67.719 31.759 15.781 1.00 22.12
ATOM 797 CD1 LEU 261 68.998 30.938 15.665 1.00 18.51
ATOM 798 CD2 LEU 261 66.498 30.851 15.800 1.00 19.60
ATOM 799 C LEU 261 68.873 34.527 15.920 1.00 22.95
ATOM 800 O LEU 261 69.779 34.402 15.091 1.00 22.62
ATOM 801 N ARG 262 67.892 35.418 15.798 1.00 22.12
ATOM 802 CA ARG 262 67.816 36.301 14.643 1.00 25.32
ATOM 803 CB ARG 262 66.525 37.115 14.677 1.00 21.95

```
ATOM    804  CG  ARG   262      65.304  36.268  14.362  1.00 21.48
ATOM    805  CD  ARG   262      64.026  37.077  14.345  1.00 19.12
ATOM    806  NE  ARG   262      62.990  36.377  13.599  1.00 22.18
ATOM    807  CZ  ARG   262      61.780  36.862  13.333  1.00 22.88
ATOM    808  NH1 ARG   262      61.429  38.075  13.752  1.00 20.81
ATOM    809  NH2 ARG   262      60.912  36.129  12.648  1.00 20.26
ATOM    810  C   ARG   262      69.044  37.196  14.531  1.00 25.05
ATOM    811  O   ARG   262      69.485  37.513  13.427  1.00 22.98
ATOM    812  N   ALA   263      69.608  37.579  15.676  1.00 26.36
ATOM    813  CA  ALA   263      70.818  38.400  15.705  1.00 27.02
ATOM    814  CB  ALA   263      70.997  39.045  17.087  1.00 25.80
ATOM    815  C   ALA   263      72.026  37.514  15.368  1.00 25.21
ATOM    816  O   ALA   263      72.825  37.844  14.492  1.00 31.14
ATOM    817  N   ALA   264      72.109  36.358  16.027  1.00 25.62
ATOM    818  CA  ALA   264      73.203  35.408  15.828  1.00 23.85
ATOM    819  CB  ALA   264      73.062  34.237  16.794  1.00 17.15
ATOM    820  C   ALA   264      73.345  34.901  14.391  1.00 26.03
ATOM    821  O   ALA   264      74.460  34.773  13.886  1.00 25.66
ATOM    822  N   VAL   265      72.234  34.615  13.723  1.00 25.22
ATOM    823  CA  VAL   265      72.327  34.128  12.350  1.00 28.38
ATOM    824  CB  VAL   265      71.028  33.457  11.857  1.00 24.59
ATOM    825  CG1 VAL   265      70.707  32.264  12.719  1.00 25.53
ATOM    826  CG2 VAL   265      69.881  34.440  11.853  1.00 20.86
ATOM    827  C   VAL   265      72.747  35.235  11.393  1.00 31.46
ATOM    828  O   VAL   265      73.024  34.973  10.222  1.00 34.75
ATOM    829  N   ARG   266      72.795  36.464  11.896  1.00 30.10
ATOM    830  CA  ARG   266      73.211  37.602  11.089  1.00 30.69
ATOM    831  CB  ARG   266      72.170  38.713  11.148  1.00 25.13
ATOM    832  CG  ARG   266      70.976  38.406  10.299  1.00 25.43
ATOM    833  CD  ARG   266      69.999  39.537  10.277  1.00 29.56
ATOM    834  NE  ARG   266      69.032  39.340   9.205  1.00 31.59
ATOM    835  CZ  ARG   266      67.814  39.861   9.197  1.00 31.18
ATOM    836  NH1 ARG   266      67.408  40.611  10.215  1.00 31.01
ATOM    837  NH2 ARG   266      67.012  39.648   8.163  1.00 28.21
ATOM    838  C   ARG   266      74.568  38.111  11.544  1.00 34.28
ATOM    839  O   ARG   266      74.877  39.300  11.423  1.00 41.19
ATOM    840  N   TYR   267      75.362  37.207  12.108  1.00 30.80
ATOM    841  CA  TYR   267      76.694  37.544  12.573  1.00 33.84
ATOM    842  CB  TYR   267      77.202  36.461  13.534  1.00 32.56
ATOM    843  CG  TYR   267      78.674  36.570  13.867  1.00 34.23
ATOM    844  CD1 TYR   267      79.131  37.465  14.835  1.00 32.60
ATOM    845  CE1 TYR   267      80.491  37.593  15.106  1.00 34.90
ATOM    846  CD2 TYR   267      79.615  35.801  13.184  1.00 32.84
ATOM    847  CE2 TYR   267      80.972  35.920  13.446  1.00 34.70
ATOM    848  CZ  TYR   267      81.404  36.816  14.405  1.00 36.21
ATOM    849  OH  TYR   267      82.749  36.940  14.651  1.00 39.48
ATOM    850  C   TYR   267      77.615  37.649  11.360  1.00 37.82
```

```
ATOM   851  O   TYR   267      77.648  36.749  10.517  1.00 39.45
ATOM   852  N   ASP   268      78.319  38.769  11.239  1.00 44.62
ATOM   853  CA  ASP   268      79.248  38.963  10.133  1.00 45.56
ATOM   854  CB  ASP   268      79.096  40.366   9.533  1.00 46.62
ATOM   855  CG  ASP   268      80.068  40.624   8.391  1.00 50.96
ATOM   856  OD1 ASP   268      80.204  39.755   7.502  1.00 55.65
ATOM   857  OD2 ASP   268      80.700  41.699   8.384  1.00 52.09
ATOM   858  C   ASP   268      80.675  38.751  10.630  1.00 44.44
ATOM   859  O   ASP   268      81.242  39.614  11.304  1.00 45.68
ATOM   860  N   PRO   269      81.281  37.600  10.296  1.00 45.94
ATOM   861  CD  PRO   269      80.739  36.503   9.476  1.00 43.72
ATOM   862  CA  PRO   269      82.651  37.309  10.730  1.00 46.63
ATOM   863  CB  PRO   269      82.884  35.889  10.208  1.00 43.88
ATOM   864  CG  PRO   269      81.983  35.797   9.018  1.00 44.66
ATOM   865  C   PRO   269      83.682  38.298  10.190  1.00 50.80
ATOM   866  O   PRO   269      84.681  38.578  10.854  1.00 48.56
ATOM   867  N   ALA   270      83.407  38.858   9.012  1.00 55.09
ATOM   868  CA  ALA   270      84.306  39.820   8.374  1.00 55.68
ATOM   869  CB  ALA   270      83.799  40.168   6.974  1.00 53.64
ATOM   870  C   ALA   270      84.528  41.096   9.196  1.00 56.18
ATOM   871  O   ALA   270      85.577  41.729   9.082  1.00 61.07
ATOM   872  N   SER   271      83.543  41.479  10.006  1.00 51.38
ATOM   873  CA  SER   271      83.661  42.678  10.836  1.00 45.90
ATOM   874  CB  SER   271      82.710  43.774  10.346  1.00 44.49
ATOM   875  OG  SER   271      81.360  43.358  10.404  1.00 45.26
ATOM   876  C   SER   271      83.409  42.395  12.317  1.00 46.61
ATOM   877  O   SER   271      83.431  43.309  13.143  1.00 48.31
ATOM   878  N   ASP   272      83.172  41.126  12.642  1.00 46.73
ATOM   879  CA  ASP   272      82.920  40.689  14.013  1.00 42.49
ATOM   880  CB  ASP   272      84.200  40.807  14.849  1.00 42.12
ATOM   881  CG  ASP   272      84.103  40.072  16.169  1.00 50.30
ATOM   882  OD1 ASP   272      83.417  39.028  16.218  1.00 45.10
ATOM   883  OD2 ASP   272      84.708  40.537  17.160  1.00 57.61
ATOM   884  C   ASP   272      81.769  41.465  14.658  1.00 40.95
ATOM   885  O   ASP   272      81.885  41.975  15.779  1.00 42.93
ATOM   886  N   THR   273      80.651  41.531  13.945  1.00 38.57
ATOM   887  CA  THR   273      79.473  42.239  14.425  1.00 40.99
ATOM   888  CB  THR   273      79.262  43.574  13.656  1.00 40.76
ATOM   889  OG1 THR   273      79.240  43.318  12.248  1.00 42.61
ATOM   890  CG2 THR   273      80.373  44.574  13.965  1.00 39.67
ATOM   891  C   THR   273      78.210  41.397  14.251  1.00 39.94
ATOM   892  O   THR   273      78.202  40.419  13.494  1.00 36.66
ATOM   893  N   LEU   274      77.168  41.757  14.993  1.00 36.08
ATOM   894  CA  LEU   274      75.867  41.096  14.907  1.00 34.28
ATOM   895  CB  LEU   274      75.343  40.699  16.292  1.00 30.96
ATOM   896  CG  LEU   274      75.952  39.536  17.068  1.00 30.19
ATOM   897  CD1 LEU   274      75.310  39.472  18.444  1.00 26.29
```

ATOM 898 CD2 LEU 274 75.744 38.237 16.309 1.00 27.43
ATOM 899 C LEU 274 74.943 42.163 14.347 1.00 36.49
ATOM 900 O LEU 274 75.152 43.354 14.596 1.00 40.27
ATOM 901 N THR 275 73.923 41.758 13.606 1.00 36.42
ATOM 902 CA THR 275 72.994 42.731 13.062 1.00 35.07
ATOM 903 CB THR 275 72.773 42.522 11.556 1.00 36.04
ATOM 904 OG1 THR 275 74.028 42.625 10.875 1.00 41.52
ATOM 905 CG2 THR 275 71.852 43.583 11.008 1.00 36.47
ATOM 906 C THR 275 71.673 42.655 13.814 1.00 34.32
ATOM 907 O THR 275 71.055 41.590 13.907 1.00 34.96
ATOM 908 N LEU 276 71.292 43.767 14.432 1.00 31.79
ATOM 909 CA LEU 276 70.044 43.840 15.173 1.00 29.47
ATOM 910 CB LEU 276 70.181 44.766 16.389 1.00 25.29
ATOM 911 CG LEU 276 71.328 44.501 17.383 1.00 29.01
ATOM 912 CD1 LEU 276 71.179 45.410 18.594 1.00 20.92
ATOM 913 CD2 LEU 276 71.358 43.042 17.834 1.00 22.79
ATOM 914 C LEU 276 68.966 44.350 14.228 1.00 31.69
ATOM 915 O LEU 276 69.175 45.335 13.510 1.00 33.87
ATOM 916 N SER 277 67.862 43.608 14.162 1.00 33.07
ATOM 917 CA SER 277 66.721 43.935 13.315 1.00 30.61
ATOM 918 CB SER 277 65.949 45.111 13.909 1.00 22.87
ATOM 919 OG SER 277 65.587 44.822 15.250 1.00 23.35
ATOM 920 C SER 277 67.103 44.200 11.860 1.00 31.85
ATOM 921 O SER 277 66.433 44.958 11.158 1.00 32.13
ATOM 922 N GLY 278 68.188 43.566 11.421 1.00 32.29
ATOM 923 CA GLY 278 68.664 43.716 10.058 1.00 37.59
ATOM 924 C GLY 278 69.063 45.122 9.639 1.00 43.26
ATOM 925 O GLY 278 69.313 45.358 8.455 1.00 42.60
ATOM 926 N GLU 279 69.177 46.038 10.599 1.00 43.42
ATOM 927 CA GLU 279 69.532 47.420 10.291 1.00 44.55
ATOM 928 CB GLU 279 68.292 48.310 10.394 1.00 44.66
ATOM 929 CG GLU 279 67.671 48.344 11.783 1.00 54.19
ATOM 930 CD GLU 279 66.400 49.171 11.845 1.00 64.96
ATOM 931 OE1 GLU 279 65.627 49.174 10.859 1.00 71.43
ATOM 932 OE2 GLU 279 66.167 49.814 12.891 1.00 66.65
ATOM 933 C GLU 279 70.654 48.019 11.133 1.00 45.52
ATOM 934 O GLU 279 71.207 49.057 10.772 1.00 51.83
ATOM 935 N MET 280 71.007 47.373 12.242 1.00 44.66
ATOM 936 CA MET 280 72.060 47.904 13.105 1.00 34.22
ATOM 937 CB MET 280 71.470 48.382 14.433 1.00 32.38
ATOM 938 CG MET 280 72.479 49.058 15.345 1.00 37.87
ATOM 939 SD MET 280 71.912 49.201 17.052 1.00 41.78
ATOM 940 CE MET 280 70.650 50.495 16.911 1.00 37.01
ATOM 941 C MET 280 73.183 46.920 13.386 1.00 35.70
ATOM 942 O MET 280 72.976 45.900 14.044 1.00 36.99
ATOM 943 N ALA 281 74.366 47.221 12.867 1.00 34.80
ATOM 944 CA ALA 281 75.535 46.377 13.091 1.00 35.11

ATOM 945 CB ALA 281 76.529 46.527 11.955 1.00 31.27
ATOM 946 C ALA 281 76.155 46.837 14.406 1.00 35.96
ATOM 947 O ALA 281 76.478 48.015 14.570 1.00 39.10
ATOM 948 N VAL 282 76.285 45.916 15.353 1.00 36.46
ATOM 949 CA VAL 282 76.839 46.246 16.655 1.00 36.05
ATOM 950 CB VAL 282 75.783 46.090 17.783 1.00 35.60
ATOM 951 CG1 VAL 282 74.633 47.069 17.568 1.00 38.73
ATOM 952 CG2 VAL 282 75.262 44.660 17.844 1.00 33.27
ATOM 953 C VAL 282 78.062 45.408 16.996 1.00 37.70
ATOM 954 O VAL 282 78.137 44.223 16.660 1.00 37.45
ATOM 955 N ALA 283 79.032 46.047 17.637 1.00 39.21
ATOM 956 CA ALA 283 80.254 45.375 18.048 1.00 43.73
ATOM 957 CB ALA 283 81.433 46.352 18.047 1.00 42.04
ATOM 958 C ALA 283 80.060 44.752 19.435 1.00 43.28
ATOM 959 O ALA 283 79.179 45.157 20.203 1.00 45.77
ATOM 960 N ARG 284 80.903 43.774 19.744 1.00 41.96
ATOM 961 CA ARG 284 80.866 43.044 21.004 1.00 44.87
ATOM 962 CB ARG 284 82.084 42.125 21.087 1.00 46.34
ATOM 963 CG ARG 284 81.930 40.947 22.017 1.00 51.85
ATOM 964 CD ARG 284 83.107 40.010 21.844 1.00 60.73
ATOM 965 NE ARG 284 83.262 39.571 20.455 1.00 54.30
ATOM 966 CZ ARG 284 83.221 38.300 20.074 1.00 53.66
ATOM 967 NH1 ARG 284 83.032 37.343 20.973 1.00 49.99
ATOM 968 NH2 ARG 284 83.379 37.984 18.797 1.00 47.31
ATOM 969 C ARG 284 80.803 43.945 22.237 1.00 44.85
ATOM 970 O ARG 284 79.896 43.806 23.062 1.00 48.26
ATOM 971 N GLU 285 81.750 44.873 22.349 1.00 41.60
ATOM 972 CA GLU 285 81.802 45.787 23.484 1.00 41.17
ATOM 973 CB GLU 285 83.043 46.675 23.392 1.00 39.97
ATOM 974 C GLU 285 80.538 46.640 23.603 1.00 40.08
ATOM 975 O GLU 285 80.023 46.849 24.703 1.00 41.16
ATOM 976 N GLN 286 80.017 47.088 22.463 1.00 38.49
ATOM 977 CA GLN 286 78.818 47.926 22.425 1.00 36.25
ATOM 978 CB GLN 286 78.549 48.401 20.997 1.00 39.50
ATOM 979 CG GLN 286 79.619 49.311 20.424 1.00 43.62
ATOM 980 CD GLN 286 79.324 49.710 18.987 1.00 49.48
ATOM 981 OE1 GLN 286 79.253 48.856 18.097 1.00 48.41
ATOM 982 NE2 GLN 286 79.125 51.000 18.755 1.00 47.15
ATOM 983 C GLN 286 77.563 47.255 22.988 1.00 35.40
ATOM 984 O GLN 286 76.903 47.806 23.871 1.00 31.24
ATOM 985 N LEU 287 77.234 46.071 22.480 1.00 32.96
ATOM 986 CA LEU 287 76.055 45.349 22.950 1.00 33.40
ATOM 987 CB LEU 287 75.767 44.138 22.054 1.00 28.67
ATOM 988 CG LEU 287 74.466 43.375 22.342 1.00 26.66
ATOM 989 CD1 LEU 287 73.263 44.305 22.244 1.00 19.41
ATOM 990 CD2 LEU 287 74.325 42.221 21.368 1.00 24.84
ATOM 991 C LEU 287 76.234 44.914 24.406 1.00 34.81

ATOM 992 O LEU 287 75.265 44.857 25.175 1.00 33.92
ATOM 993 N LYS 288 77.476 44.621 24.781 1.00 35.38
ATOM 994 CA LYS 288 77.814 44.204 26.140 1.00 36.12
ATOM 995 CB LYS 288 79.296 43.839 26.210 1.00 37.13
ATOM 996 CG LYS 288 79.762 43.280 27.533 1.00 44.61
ATOM 997 CD LYS 288 81.256 43.018 27.494 1.00 54.07
ATOM 998 CE LYS 288 81.757 42.435 28.801 1.00 60.87
ATOM 999 NZ LYS 288 81.291 41.041 29.039 1.00 61.53
ATOM 1000 C LYS 288 77.510 45.345 27.109 1.00 36.90
ATOM 1001 O LYS 288 76.684 45.206 28.013 1.00 40.68
ATOM 1002 N ASN 289 78.129 46.495 26.863 1.00 35.94
ATOM 1003 CA ASN 289 77.947 47.680 27.695 1.00 36.12
ATOM 1004 CB ASN 289 78.982 48.738 27.332 1.00 31.78
ATOM 1005 CG ASN 289 80.388 48.263 27.569 1.00 40.31
ATOM 1006 OD1 ASN 289 80.627 47.422 28.440 1.00 43.12
ATOM 1007 ND2 ASN 289 81.326 48.758 26.775 1.00 35.36
ATOM 1008 C ASN 289 76.553 48.277 27.590 1.00 36.98
ATOM 1009 O ASN 289 76.099 48.959 28.509 1.00 34.29
ATOM 1010 N GLY 290 75.883 48.032 26.466 1.00 32.65
ATOM 1011 CA GLY 290 74.541 48.550 26.256 1.00 28.61
ATOM 1012 C GLY 290 73.497 48.001 27.210 1.00 26.54
ATOM 1013 O GLY 290 72.362 48.480 27.234 1.00 31.06
ATOM 1014 N GLY 291 73.861 46.978 27.977 1.00 28.89
ATOM 1015 CA GLY 291 72.929 46.413 28.937 1.00 25.24
ATOM 1016 C GLY 291 72.872 44.900 28.997 1.00 28.12
ATOM 1017 O GLY 291 72.335 44.345 29.955 1.00 31.16
ATOM 1018 N LEU 292 73.406 44.223 27.985 1.00 29.51
ATOM 1019 CA LEU 292 73.361 42.766 27.969 1.00 32.79
ATOM 1020 CB LEU 292 73.304 42.240 26.531 1.00 28.00
ATOM 1021 CG LEU 292 71.948 42.355 25.827 1.00 23.68
ATOM 1022 CD1 LEU 292 72.004 41.626 24.509 1.00 26.12
ATOM 1023 CD2 LEU 292 70.851 41.764 26.694 1.00 23.36
ATOM 1024 C LEU 292 74.484 42.085 28.742 1.00 32.33
ATOM 1025 O LEU 292 74.312 40.967 29.232 1.00 32.22
ATOM 1026 N GLY 293 75.627 42.750 28.846 1.00 30.31
ATOM 1027 CA GLY 293 76.751 42.176 29.561 1.00 28.82
ATOM 1028 C GLY 293 77.238 40.894 28.913 1.00 29.87
ATOM 1029 O GLY 293 77.432 40.843 27.698 1.00 35.43
ATOM 1030 N VAL 294 77.392 39.848 29.714 1.00 31.88
ATOM 1031 CA VAL 294 77.866 38.561 29.217 1.00 35.77
ATOM 1032 CB VAL 294 78.232 37.590 30.363 1.00 34.29
ATOM 1033 CG1 VAL 294 79.462 38.092 31.095 1.00 37.54
ATOM 1034 CG2 VAL 294 77.065 37.425 31.322 1.00 25.62
ATOM 1035 C VAL 294 76.882 37.879 28.274 1.00 35.89
ATOM 1036 O VAL 294 77.263 36.960 27.541 1.00 37.99
ATOM 1037 N VAL 295 75.619 38.304 28.305 1.00 34.41
ATOM 1038 CA VAL 295 74.616 37.728 27.413 1.00 32.98

ATOM 1039 CB VAL 295 73.208 38.298 27.677 1.00 31.25
ATOM 1040 CG1 VAL 295 72.208 37.706 26.694 1.00 23.54
ATOM 1041 CG2 VAL 295 72.783 37.993 29.101 1.00 23.07
ATOM 1042 C VAL 295 75.057 38.062 25.993 1.00 33.92
ATOM 1043 O VAL 295 74.932 37.238 25.090 1.00 36.95
ATOM 1044 N SER 296 75.625 39.253 25.820 1.00 31.27
ATOM 1045 CA SER 296 76.118 39.695 24.521 1.00 33.38
ATOM 1046 CB SER 296 76.667 41.115 24.620 1.00 24.78
ATOM 1047 OG SER 296 77.368 41.478 23.449 1.00 25.43
ATOM 1048 C SER 296 77.216 38.748 24.045 1.00 35.86
ATOM 1049 O SER 296 77.220 38.324 22.886 1.00 39.60
ATOM 1050 N ASP 297 78.135 38.402 24.943 1.00 37.41
ATOM 1051 CA ASP 297 79.227 37.490 24.602 1.00 35.39
ATOM 1052 CB ASP 297 80.147 37.269 25.808 1.00 43.07
ATOM 1053 CG ASP 297 80.839 38.540 26.266 1.00 45.07
ATOM 1054 OD1 ASP 297 81.175 39.398 25.419 1.00 48.02
ATOM 1055 OD2 ASP 297 81.064 38.670 27.485 1.00 50.13
ATOM 1056 C ASP 297 78.662 36.145 24.161 1.00 30.87
ATOM 1057 O ASP 297 79.155 35.534 23.213 1.00 33.92
ATOM 1058 N ALA 298 77.625 35.698 24.861 1.00 28.96
ATOM 1059 CA ALA 298 76.971 34.428 24.574 1.00 30.60
ATOM 1060 CB ALA 298 75.889 34.157 25.610 1.00 27.56
ATOM 1061 C ALA 298 76.377 34.408 23.163 1.00 33.04
ATOM 1062 O ALA 298 76.538 33.426 22.426 1.00 32.48
ATOM 1063 N ILE 299 75.706 35.493 22.786 1.00 30.92
ATOM 1064 CA ILE 299 75.091 35.588 21.468 1.00 24.71
ATOM 1065 CB ILE 299 74.138 36.789 21.368 1.00 22.98
ATOM 1066 CG2 ILE 299 73.430 36.786 20.018 1.00 21.90
ATOM 1067 CG1 ILE 299 73.091 36.707 22.477 1.00 20.91
ATOM 1068 CD1 ILE 299 72.266 37.951 22.634 1.00 19.86
ATOM 1069 C ILE 299 76.168 35.680 20.395 1.00 26.77
ATOM 1070 O ILE 299 76.036 35.069 19.335 1.00 30.21
ATOM 1071 N PHE 300 77.238 36.428 20.673 1.00 29.08
ATOM 1072 CA PHE 300 78.345 36.562 19.726 1.00 28.06
ATOM 1073 CB PHE 300 79.386 37.565 20.235 1.00 29.06
ATOM 1074 CG PHE 300 79.289 38.920 19.590 1.00 28.14
ATOM 1075 CD1 PHE 300 78.449 39.896 20.113 1.00 27.20
ATOM 1076 CD2 PHE 300 80.017 39.209 18.437 1.00 29.11
ATOM 1077 CE1 PHE 300 78.332 41.139 19.499 1.00 28.18
ATOM 1078 CE2 PHE 300 79.908 40.450 17.815 1.00 29.07
ATOM 1079 CZ PHE 300 79.064 41.416 18.348 1.00 22.61
ATOM 1080 C PHE 300 78.991 35.201 19.485 1.00 29.00
ATOM 1081 O PHE 300 79.278 34.833 18.344 1.00 30.35
ATOM 1082 N GLU 301 79.183 34.442 20.560 1.00 31.81
ATOM 1083 CA GLU 301 79.767 33.111 20.470 1.00 34.96
ATOM 1084 CB GLU 301 79.962 32.528 21.865 1.00 30.78
ATOM 1085 C GLU 301 78.850 32.210 19.634 1.00 35.49

ATOM 1086 O GLU 301 79.322 31.438 18.793 1.00 35.76
ATOM 1087 N LEU 302 77.543 32.313 19.869 1.00 32.14
ATOM 1088 CA LEU 302 76.559 31.522 19.132 1.00 25.56
ATOM 1089 CB LEU 302 75.147 31.760 19.682 1.00 23.33
ATOM 1090 CG LEU 302 73.992 31.006 19.010 1.00 28.73
ATOM 1091 CD1 LEU 302 74.093 29.509 19.270 1.00 23.93
ATOM 1092 CD2 LEU 302 72.667 31.551 19.514 1.00 21.32
ATOM 1093 C LEU 302 76.617 31.885 17.650 1.00 23.10
ATOM 1094 O LEU 302 76.664 31.001 16.796 1.00 26.79
ATOM 1095 N GLY 303 76.672 33.181 17.353 1.00 22.79
ATOM 1096 CA GLY 303 76.745 33.631 15.974 1.00 21.60
ATOM 1097 C GLY 303 77.978 33.104 15.256 1.00 30.42
ATOM 1098 O GLY 303 77.889 32.619 14.125 1.00 29.18
ATOM 1099 N ALA 304 79.132 33.182 15.912 1.00 31.15
ATOM 1100 CA ALA 304 80.375 32.703 15.313 1.00 35.44
ATOM 1101 CB ALA 304 81.562 32.995 16.235 1.00 29.16
ATOM 1102 C ALA 304 80.300 31.208 14.978 1.00 35.15
ATOM 1103 O ALA 304 80.705 30.785 13.891 1.00 37.13
ATOM 1104 N SER 305 79.753 30.414 15.892 1.00 33.91
ATOM 1105 CA SER 305 79.638 28.979 15.663 1.00 36.39
ATOM 1106 CB SER 305 79.395 28.237 16.980 1.00 32.71
ATOM 1107 OG SER 305 78.265 28.749 17.663 1.00 48.66
ATOM 1108 C SER 305 78.558 28.619 14.641 1.00 37.61
ATOM 1109 O SER 305 78.747 27.697 13.845 1.00 39.92
ATOM 1110 N LEU 306 77.443 29.349 14.651 1.00 38.21
ATOM 1111 CA LEU 306 76.350 29.092 13.714 1.00 35.65
ATOM 1112 CB LEU 306 75.094 29.894 14.077 1.00 25.49
ATOM 1113 CG LEU 306 74.209 29.374 15.212 1.00 26.18
ATOM 1114 CD1 LEU 306 72.988 30.262 15.361 1.00 23.40
ATOM 1115 CD2 LEU 306 73.777 27.952 14.921 1.00 23.57
ATOM 1116 C LEU 306 76.723 29.356 12.258 1.00 38.05
ATOM 1117 O LEU 306 76.092 28.809 11.353 1.00 37.22
ATOM 1118 N SER 307 77.743 30.185 12.030 1.00 40.41
ATOM 1119 CA SER 307 78.199 30.511 10.677 1.00 40.85
ATOM 1120 CB SER 307 79.415 31.442 10.736 1.00 37.32
ATOM 1121 OG SER 307 79.086 32.678 11.344 1.00 56.20
ATOM 1122 C SER 307 78.550 29.270 9.852 1.00 39.87
ATOM 1123 O SER 307 78.221 29.191 8.670 1.00 44.27
ATOM 1124 N ALA 308 79.207 28.305 10.487 1.00 39.29
ATOM 1125 CA ALA 308 79.609 27.066 9.826 1.00 33.10
ATOM 1126 CB ALA 308 80.607 26.310 10.696 1.00 33.37
ATOM 1127 C ALA 308 78.403 26.177 9.502 1.00 34.07
ATOM 1128 O ALA 308 78.467 25.340 8.600 1.00 40.61
ATOM 1129 N PHE 309 77.305 26.368 10.230 1.00 31.85
ATOM 1130 CA PHE 309 76.095 25.581 10.015 1.00 35.24
ATOM 1131 CB PHE 309 75.149 25.698 11.219 1.00 33.69
ATOM 1132 CG PHE 309 75.618 24.954 12.437 1.00 36.16

ATOM 1133 CD1 PHE 309 76.785 25.327 13.090 1.00 43.79
ATOM 1134 CD2 PHE 309 74.903 23.867 12.922 1.00 38.03
ATOM 1135 CE1 PHE 309 77.237 24.627 14.210 1.00 41.12
ATOM 1136 CE2 PHE 309 75.346 23.161 14.040 1.00 41.08
ATOM 1137 CZ PHE 309 76.514 23.543 14.683 1.00 38.37
ATOM 1138 C PHE 309 75.361 25.934 8.720 1.00 36.31
ATOM 1139 O PHE 309 74.633 25.095 8.173 1.00 37.84
ATOM 1140 N ASN 310 75.567 27.155 8.225 1.00 35.22
ATOM 1141 CA ASN 310 74.933 27.625 6.988 1.00 43.66
ATOM 1142 CB ASN 310 75.536 26.930 5.760 1.00 54.13
ATOM 1143 CG ASN 310 76.980 27.339 5.501 1.00 68.29
ATOM 1144 OD1 ASN 310 77.297 28.527 5.412 1.00 74.62
ATOM 1145 ND2 ASN 310 77.859 26.348 5.352 1.00 68.85
ATOM 1146 C ASN 310 73.430 27.385 7.013 1.00 38.37
ATOM 1147 O ASN 310 72.882 26.735 6.123 1.00 36.70
ATOM 1148 N LEU 311 72.780 27.865 8.062 1.00 35.22
ATOM 1149 CA LEU 311 71.345 27.690 8.206 1.00 34.32
ATOM 1150 CB LEU 311 70.895 28.054 9.630 1.00 30.19
ATOM 1151 CG LEU 311 71.458 27.306 10.845 1.00 26.76
ATOM 1152 CD1 LEU 311 70.792 27.847 12.104 1.00 21.37
ATOM 1153 CD2 LEU 311 71.217 25.813 10.722 1.00 22.95
ATOM 1154 C LEU 311 70.601 28.561 7.206 1.00 34.64
ATOM 1155 O LEU 311 71.087 29.625 6.820 1.00 37.70
ATOM 1156 N ASP 312 69.444 28.091 6.752 1.00 29.40
ATOM 1157 CA ASP 312 68.634 28.867 5.823 1.00 28.65
ATOM 1158 CB ASP 312 68.302 28.061 4.545 1.00 24.79
ATOM 1159 CG ASP 312 67.459 26.804 4.804 1.00 21.47
ATOM 1160 OD1 ASP 312 66.994 26.549 5.932 1.00 27.92
ATOM 1161 OD2 ASP 312 67.250 26.057 3.832 1.00 27.53
ATOM 1162 C ASP 312 67.380 29.346 6.557 1.00 25.92
ATOM 1163 O ASP 312 67.167 28.985 7.717 1.00 26.98
ATOM 1164 N ASP 313 66.540 30.122 5.878 1.00 21.78
ATOM 1165 CA ASP 313 65.315 30.653 6.471 1.00 22.89
ATOM 1166 CB ASP 313 64.517 31.458 5.439 1.00 29.19
ATOM 1167 CG ASP 313 65.216 32.739 5.025 1.00 36.82
ATOM 1168 OD1 ASP 313 65.985 33.285 5.845 1.00 41.51
ATOM 1169 OD2 ASP 313 64.997 33.203 3.883 1.00 44.19
ATOM 1170 C ASP 313 64.421 29.587 7.085 1.00 25.09
ATOM 1171 O ASP 313 63.778 29.829 8.110 1.00 27.60
ATOM 1172 N THR 314 64.363 28.420 6.449 1.00 20.90
ATOM 1173 CA THR 314 63.538 27.322 6.942 1.00 22.71
ATOM 1174 CB THR 314 63.408 26.208 5.884 1.00 22.07
ATOM 1175 OG1 THR 314 62.825 26.746 4.693 1.00 23.15
ATOM 1176 CG2 THR 314 62.542 25.079 6.401 1.00 18.17
ATOM 1177 C THR 314 64.080 26.734 8.249 1.00 19.95
ATOM 1178 O THR 314 63.326 26.477 9.182 1.00 22.40
ATOM 1179 N GLU 315 65.391 26.536 8.318 1.00 20.01

ATOM 1180 CA GLU 315 65.997 25.987 9.523 1.00 19.40
ATOM 1181 CB GLU 315 67.454 25.626 9.254 1.00 11.72
ATOM 1182 CG GLU 315 67.544 24.440 8.322 1.00 13.43
ATOM 1183 CD GLU 315 68.925 24.157 7.791 1.00 18.51
ATOM 1184 OE1 GLU 315 69.666 25.107 7.451 1.00 23.24
ATOM 1185 OE2 GLU 315 69.254 22.962 7.673 1.00 24.23
ATOM 1186 C GLU 315 65.833 26.960 10.681 1.00 20.12
ATOM 1187 O GLU 315 65.425 26.570 11.777 1.00 20.53
ATOM 1188 N VAL 316 66.055 28.240 10.406 1.00 21.79
ATOM 1189 CA VAL 316 65.898 29.270 11.425 1.00 18.14
ATOM 1190 CB VAL 316 66.346 30.659 10.898 1.00 18.97
ATOM 1191 CG1 VAL 316 66.040 31.741 11.929 1.00 19.08
ATOM 1192 CG2 VAL 316 67.840 30.641 10.537 1.00 17.97
ATOM 1193 C VAL 316 64.430 29.332 11.880 1.00 22.54
ATOM 1194 O VAL 316 64.146 29.433 13.072 1.00 26.47
ATOM 1195 N ALA 317 63.505 29.242 10.924 1.00 19.66
ATOM 1196 CA ALA 317 62.076 29.286 11.216 1.00 16.99
ATOM 1197 CB ALA 317 61.279 29.329 9.926 1.00 17.79
ATOM 1198 C ALA 317 61.619 28.105 12.063 1.00 14.12
ATOM 1199 O ALA 317 60.808 28.263 12.970 1.00 17.04
ATOM 1200 N LEU 318 62.104 26.911 11.740 1.00 20.37
ATOM 1201 CA LEU 318 61.725 25.714 12.485 1.00 21.12
ATOM 1202 CB LEU 318 62.131 24.448 11.718 1.00 21.80
ATOM 1203 CG LEU 318 61.364 24.265 10.398 1.00 18.11
ATOM 1204 CD1 LEU 318 61.946 23.125 9.594 1.00 16.79
ATOM 1205 CD2 LEU 318 59.891 24.024 10.676 1.00 12.66
ATOM 1206 C LEU 318 62.335 25.752 13.880 1.00 22.03
ATOM 1207 O LEU 318 61.688 25.373 14.858 1.00 21.35
ATOM 1208 N LEU 319 63.564 26.257 13.964 1.00 20.03
ATOM 1209 CA LEU 319 64.260 26.395 15.236 1.00 20.24
ATOM 1210 CB LEU 319 65.657 26.960 15.001 1.00 19.07
ATOM 1211 CG LEU 319 66.594 27.108 16.196 1.00 27.61
ATOM 1212 CD1 LEU 319 66.518 25.883 17.083 1.00 29.73
ATOM 1213 CD2 LEU 319 68.012 27.326 15.699 1.00 20.98
ATOM 1214 C LEU 319 63.422 27.334 16.118 1.00 21.16
ATOM 1215 O LEU 319 63.144 27.032 17.279 1.00 26.65
ATOM 1216 N GLN 320 62.958 28.439 15.539 1.00 20.77
ATOM 1217 CA GLN 320 62.119 29.390 16.265 1.00 17.87
ATOM 1218 CB GLN 320 61.781 30.594 15.388 1.00 18.74
ATOM 1219 CG GLN 320 62.957 31.496 15.111 1.00 21.07
ATOM 1220 CD GLN 320 62.637 32.617 14.150 1.00 22.88
ATOM 1221 OE1 GLN 320 61.571 32.653 13.528 1.00 26.07
ATOM 1222 NE2 GLN 320 63.574 33.537 14.006 1.00 20.11
ATOM 1223 C GLN 320 60.829 28.728 16.730 1.00 19.08
ATOM 1224 O GLN 320 60.368 28.976 17.844 1.00 23.39
ATOM 1225 N ALA 321 60.251 27.886 15.876 1.00 22.71
ATOM 1226 CA ALA 321 59.010 27.187 16.201 1.00 18.86

ATOM 1227 CB ALA 321 58.495 26.422 14.993 1.00 17.22
ATOM 1228 C ALA 321 59.220 26.235 17.376 1.00 19.85
ATOM 1229 O ALA 321 58.362 26.119 18.250 1.00 19.60
ATOM 1230 N VAL 322 60.368 25.561 17.396 1.00 20.25
ATOM 1231 CA VAL 322 60.693 24.628 18.469 1.00 21.32
ATOM 1232 CB VAL 322 61.956 23.800 18.116 1.00 20.46
ATOM 1233 CG1 VAL 322 62.418 22.971 19.304 1.00 20.39
ATOM 1234 CG2 VAL 322 61.662 22.890 16.930 1.00 16.83
ATOM 1235 C VAL 322 60.880 25.393 19.785 1.00 20.67
ATOM 1236 O VAL 322 60.444 24.941 20.850 1.00 21.28
ATOM 1237 N LEU 323 61.492 26.574 19.701 1.00 21.14
ATOM 1238 CA LEU 323 61.722 27.417 20.869 1.00 22.94
ATOM 1239 CB LEU 323 62.610 28.608 20.511 1.00 16.12
ATOM 1240 CG LEU 323 64.051 28.291 20.115 1.00 22.28
ATOM 1241 CD1 LEU 323 64.719 29.532 19.528 1.00 14.87
ATOM 1242 CD2 LEU 323 64.816 27.750 21.320 1.00 21.55
ATOM 1243 C LEU 323 60.398 27.932 21.410 1.00 22.55
ATOM 1244 O LEU 323 60.185 27.986 22.615 1.00 25.21
ATOM 1245 N LEU 324 59.507 28.300 20.502 1.00 24.15
ATOM 1246 CA LEU 324 58.200 28.827 20.855 1.00 19.88
ATOM 1247 CB LEU 324 57.499 29.384 19.608 1.00 15.20
ATOM 1248 CG LEU 324 56.067 29.908 19.767 1.00 17.21
ATOM 1249 CD1 LEU 324 56.021 31.161 20.637 1.00 15.99
ATOM 1250 CD2 LEU 324 55.496 30.208 18.395 1.00 20.03
ATOM 1251 C LEU 324 57.311 27.795 21.536 1.00 19.83
ATOM 1252 O LEU 324 56.767 28.064 22.609 1.00 24.47
ATOM 1253 N MET 325 57.197 26.603 20.956 1.00 25.02
ATOM 1254 CA MET 325 56.339 25.563 21.522 1.00 26.72
ATOM 1255 CB MET 325 55.823 24.644 20.410 1.00 30.03
ATOM 1256 CG MET 325 55.129 25.358 19.241 1.00 25.09
ATOM 1257 SD MET 325 53.714 26.409 19.672 1.00 27.29
ATOM 1258 CE MET 325 52.503 25.220 20.084 1.00 20.67
ATOM 1259 C MET 325 56.995 24.736 22.635 1.00 28.94
ATOM 1260 O MET 325 56.881 23.510 22.672 1.00 32.94
ATOM 1261 N SER 326 57.642 25.418 23.569 1.00 29.36
ATOM 1262 CA SER 326 58.311 24.759 24.680 1.00 31.62
ATOM 1263 CB SER 326 59.554 25.559 25.064 1.00 38.13
ATOM 1264 OG SER 326 60.277 24.949 26.119 1.00 48.99
ATOM 1265 C SER 326 57.361 24.653 25.871 1.00 33.69
ATOM 1266 O SER 326 56.620 25.594 26.166 1.00 33.66
ATOM 1267 N THR 327 57.356 23.499 26.536 1.00 38.27
ATOM 1268 CA THR 327 56.497 23.306 27.701 1.00 38.98
ATOM 1269 CB THR 327 55.875 21.896 27.730 1.00 33.30
ATOM 1270 OG1 THR 327 56.908 20.911 27.627 1.00 44.01
ATOM 1271 CG2 THR 327 54.888 21.722 26.587 1.00 38.09
ATOM 1272 C THR 327 57.239 23.570 29.018 1.00 42.88
ATOM 1273 O THR 327 56.702 23.325 30.099 1.00 43.36

```
ATOM  1274  N   ASP  328     58.462  24.091  28.924  1.00 45.92
ATOM  1275  CA  ASP  328     59.268  24.410  30.104  1.00 49.59
ATOM  1276  CB  ASP  328     60.760  24.411  29.760  1.00 59.87
ATOM  1277  CG  ASP  328     61.273  23.040  29.387  1.00 75.73
ATOM  1278  OD1 ASP  328     62.008  22.939  28.382  1.00 85.81
ATOM  1279  OD2 ASP  328     60.946  22.063  30.098  1.00 85.56
ATOM  1280  C   ASP  328     58.873  25.767  30.673  1.00 48.50
ATOM  1281  O   ASP  328     59.725  26.609  30.961  1.00 57.50
ATOM  1282  N   ARG  329     57.569  25.980  30.805  1.00 49.62
ATOM  1283  CA  ARG  329     57.032  27.222  31.340  1.00 50.52
ATOM  1284  CB  ARG  329     56.400  28.080  30.230  1.00 53.57
ATOM  1285  CG  ARG  329     57.376  28.828  29.324  1.00 51.09
ATOM  1286  CD  ARG  329     57.897  27.951  28.204  1.00 49.73
ATOM  1287  NE  ARG  329     58.692  28.699  27.233  1.00 47.44
ATOM  1288  CZ  ARG  329     60.005  28.569  27.080  1.00 54.28
ATOM  1289  NH1 ARG  329     60.688  27.722  27.839  1.00 58.35
ATOM  1290  NH2 ARG  329     60.631  29.256  26.136  1.00 51.92
ATOM  1291  C   ARG  329     55.970  26.870  32.375  1.00 51.90
ATOM  1292  O   ARG  329     55.378  25.790  32.324  1.00 50.77
ATOM  1293  N   SER  330     55.728  27.784  33.303  1.00 50.56
ATOM  1294  CA  SER  330     54.744  27.564  34.349  1.00 50.67
ATOM  1295  CB  SER  330     55.271  28.108  35.678  1.00 46.64
ATOM  1296  C   SER  330     53.404  28.213  34.004  1.00 47.63
ATOM  1297  O   SER  330     53.371  29.309  33.440  1.00 48.02
ATOM  1298  N   GLY  331     52.314  27.496  34.277  1.00 44.44
ATOM  1299  CA  GLY  331     50.977  28.023  34.044  1.00 38.77
ATOM  1300  C   GLY  331     50.236  27.710  32.756  1.00 41.74
ATOM  1301  O   GLY  331     49.147  28.246  32.537  1.00 49.57
ATOM  1302  N   LEU  332     50.783  26.841  31.912  1.00 39.75
ATOM  1303  CA  LEU  332     50.123  26.502  30.651  1.00 37.55
ATOM  1304  CB  LEU  332     51.107  25.829  29.694  1.00 32.36
ATOM  1305  CG  LEU  332     52.268  26.659  29.153  1.00 34.40
ATOM  1306  CD1 LEU  332     53.207  25.749  28.379  1.00 30.22
ATOM  1307  CD2 LEU  332     51.742  27.786  28.277  1.00 23.33
ATOM  1308  C   LEU  332     48.921  25.589  30.834  1.00 36.73
ATOM  1309  O   LEU  332     48.987  24.608  31.577  1.00 39.29
ATOM  1310  N   LEU  333     47.822  25.925  30.168  1.00 36.07
ATOM  1311  CA  LEU  333     46.615  25.107  30.215  1.00 39.58
ATOM  1312  CB  LEU  333     45.384  25.906  29.754  1.00 41.08
ATOM  1313  CG  LEU  333     44.601  26.883  30.644  1.00 47.59
ATOM  1314  CD1 LEU  333     44.268  26.213  31.961  1.00 45.65
ATOM  1315  CD2 LEU  333     45.366  28.171  30.874  1.00 47.42
ATOM  1316  C   LEU  333     46.791  23.911  29.278  1.00 40.00
ATOM  1317  O   LEU  333     46.690  22.754  29.689  1.00 44.77
ATOM  1318  N   CYA  334     47.102  24.213  28.022  1.00 37.70
ATOM  1319  CA  CYA  334     47.265  23.209  26.968  1.00 36.04
ATOM  1320  CB  CYA  334     46.815  23.808  25.635  1.00 40.64
```

ATOM 1321 SG CYA 334 45.280 24.738 25.758 1.00 44.31
ATOM 1322 AS CYA 334 43.972 22.946 25.380 1.00 76.30
ATOM 1323 C CYA 334 48.668 22.617 26.815 1.00 34.91
ATOM 1324 O CYA 334 49.237 22.615 25.722 1.00 37.63
ATOM 1325 N VAL 335 49.189 22.056 27.903 1.00 35.43
ATOM 1326 CA VAL 335 50.518 21.452 27.909 1.00 34.27
ATOM 1327 CB VAL 335 50.861 20.868 29.298 1.00 34.21
ATOM 1328 CG1 VAL 335 52.261 20.258 29.292 1.00 33.66
ATOM 1329 CG2 VAL 335 50.755 21.945 30.362 1.00 31.77
ATOM 1330 C VAL 335 50.662 20.349 26.865 1.00 37.14
ATOM 1331 O VAL 335 51.639 20.320 26.114 1.00 37.59
ATOM 1332 N ASP 336 49.683 19.451 26.813 1.00 39.99
ATOM 1333 CA ASP 336 49.705 18.339 25.866 1.00 41.64
ATOM 1334 CB ASP 336 48.532 17.392 26.146 1.00 54.27
ATOM 1335 CG ASP 336 48.596 16.118 25.322 1.00 67.42
ATOM 1336 OD1 ASP 336 47.915 16.049 24.274 1.00 70.98
ATOM 1337 OD2 ASP 336 49.337 15.191 25.717 1.00 76.88
ATOM 1338 C ASP 336 49.702 18.762 24.393 1.00 38.31
ATOM 1339 O ASP 336 50.469 18.229 23.586 1.00 37.46
ATOM 1340 N LYS 337 48.853 19.729 24.052 1.00 30.23
ATOM 1341 CA LYS 337 48.740 20.211 22.676 1.00 29.21
ATOM 1342 CB LYS 337 47.561 21.189 22.559 1.00 30.53
ATOM 1343 CG LYS 337 47.012 21.360 21.162 1.00 51.63
ATOM 1344 CD LYS 337 45.636 21.997 21.186 1.00 59.57
ATOM 1345 CE LYS 337 45.066 22.115 19.774 1.00 66.05
ATOM 1346 NZ LYS 337 43.673 22.693 19.776 1.00 67.20
ATOM 1347 C LYS 337 50.054 20.873 22.249 1.00 28.33
ATOM 1348 O LYS 337 50.581 20.594 21.170 1.00 26.08
ATOM 1349 N ILE 338 50.609 21.696 23.141 1.00 26.74
ATOM 1350 CA ILE 338 51.873 22.390 22.902 1.00 25.42
ATOM 1351 CB ILE 338 52.177 23.379 24.052 1.00 23.57
ATOM 1352 CG2 ILE 338 53.559 23.991 23.874 1.00 22.59
ATOM 1353 CG1 ILE 338 51.105 24.471 24.096 1.00 23.57
ATOM 1354 CD1 ILE 338 51.157 25.362 25.333 1.00 24.30
ATOM 1355 C ILE 338 53.018 21.382 22.768 1.00 29.20
ATOM 1356 O ILE 338 53.905 21.537 21.916 1.00 31.59
ATOM 1357 N GLU 339 52.977 20.340 23.595 1.00 34.82
ATOM 1358 CA GLU 339 53.980 19.277 23.597 1.00 34.23
ATOM 1359 CB GLU 339 53.639 18.256 24.681 1.00 40.38
ATOM 1360 CG GLU 339 54.785 17.354 25.072 1.00 54.98
ATOM 1361 CD GLU 339 55.644 17.964 26.178 1.00 71.26
ATOM 1362 OE1 GLU 339 56.766 18.444 25.858 1.00 77.82
ATOM 1363 OE2 GLU 339 55.170 17.985 27.349 1.00 65.14
ATOM 1364 C GLU 339 53.972 18.582 22.231 1.00 34.42
ATOM 1365 O GLU 339 55.018 18.431 21.590 1.00 29.41
ATOM 1366 N LYS 340 52.778 18.189 21.786 1.00 34.13
ATOM 1367 CA LYS 340 52.592 17.513 20.502 1.00 32.05

ATOM 1368 CB LYS 340 51.121 17.105 20.325 1.00 34.59
ATOM 1369 C LYS 340 53.064 18.390 19.337 1.00 32.56
ATOM 1370 O LYS 340 53.762 17.913 18.441 1.00 32.93
ATOM 1371 N SER 341 52.725 19.677 19.374 1.00 31.42
ATOM 1372 CA SER 341 53.134 20.621 18.334 1.00 27.79
ATOM 1373 CB SER 341 52.559 22.009 18.601 1.00 27.85
ATOM 1374 OG SER 341 51.149 21.966 18.579 1.00 47.20
ATOM 1375 C SER 341 54.647 20.713 18.240 1.00 26.01
ATOM 1376 O SER 341 55.205 20.706 17.139 1.00 27.10
ATOM 1377 N GLN 342 55.318 20.794 19.389 1.00 24.25
ATOM 1378 CA GLN 342 56.771 20.875 19.392 1.00 27.16
ATOM 1379 CB GLN 342 57.309 21.089 20.799 1.00 25.60
ATOM 1380 CG GLN 342 58.768 21.466 20.777 1.00 27.99
ATOM 1381 CD GLN 342 59.407 21.429 22.133 1.00 29.58
ATOM 1382 OE1 GLN 342 60.123 22.356 22.513 1.00 31.18
ATOM 1383 NE2 GLN 342 59.184 20.345 22.868 1.00 29.17
ATOM 1384 C GLN 342 57.377 19.609 18.786 1.00 28.45
ATOM 1385 O GLN 342 58.378 19.675 18.062 1.00 29.79
ATOM 1386 N GLU 343 56.777 18.458 19.078 1.00 26.58
ATOM 1387 CA GLU 343 57.251 17.190 18.525 1.00 30.07
ATOM 1388 CB GLU 343 56.462 16.016 19.114 1.00 40.79
ATOM 1389 CG GLU 343 56.812 15.700 20.568 1.00 61.22
ATOM 1390 CD GLU 343 55.951 14.594 21.166 1.00 71.76
ATOM 1391 OE1 GLU 343 55.472 13.719 20.405 1.00 76.73
ATOM 1392 OE2 GLU 343 55.758 14.601 22.403 1.00 74.09
ATOM 1393 C GLU 343 57.097 17.225 17.001 1.00 25.87
ATOM 1394 O GLU 343 58.008 16.842 16.260 1.00 27.26
ATOM 1395 N ALA 344 55.947 17.727 16.550 1.00 23.70
ATOM 1396 CA ALA 344 55.647 17.853 15.124 1.00 22.16
ATOM 1397 CB ALA 344 54.275 18.489 14.927 1.00 21.18
ATOM 1398 C ALA 344 56.729 18.694 14.454 1.00 21.24
ATOM 1399 O ALA 344 57.303 18.284 13.438 1.00 26.47
ATOM 1400 N TYR 345 57.048 19.840 15.055 1.00 22.48
ATOM 1401 CA TYR 345 58.073 20.738 14.531 1.00 21.41
ATOM 1402 CB TYR 345 58.085 22.059 15.304 1.00 20.10
ATOM 1403 CG TYR 345 57.023 23.015 14.830 1.00 15.87
ATOM 1404 CD1 TYR 345 56.004 23.434 15.682 1.00 10.54
ATOM 1405 CE1 TYR 345 54.983 24.259 15.225 1.00 17.09
ATOM 1406 CD2 TYR 345 57.003 23.448 13.505 1.00 16.86
ATOM 1407 CE2 TYR 345 55.991 24.269 13.036 1.00 16.84
ATOM 1408 CZ TYR 345 54.984 24.668 13.896 1.00 17.97
ATOM 1409 OH TYR 345 53.963 25.455 13.406 1.00 27.11
ATOM 1410 C TYR 345 59.465 20.120 14.548 1.00 24.43
ATOM 1411 O TYR 345 60.238 20.291 13.597 1.00 24.69
ATOM 1412 N LEU 346 59.777 19.401 15.621 1.00 26.75
ATOM 1413 CA LEU 346 61.074 18.746 15.767 1.00 25.06
ATOM 1414 CB LEU 346 61.207 18.108 17.150 1.00 24.59

```
ATOM  1415  CG  LEU  346      61.637  19.076  18.252  1.00 26.46
ATOM  1416  CD1 LEU  346      61.387  18.468  19.610  1.00 26.46
ATOM  1417  CD2 LEU  346      63.101  19.437  18.076  1.00 21.78
ATOM  1418  C   LEU  346      61.322  17.713  14.683  1.00 23.24
ATOM  1419  O   LEU  346      62.416  17.645  14.127  1.00 27.54
ATOM  1420  N   LEU  347      60.314  16.900  14.395  1.00 25.75
ATOM  1421  CA  LEU  347      60.437  15.881  13.356  1.00 25.41
ATOM  1422  CB  LEU  347      59.208  14.970  13.330  1.00 23.78
ATOM  1423  CG  LEU  347      59.302  13.713  14.190  1.00 31.85
ATOM  1424  CD1 LEU  347      58.004  12.928  14.089  1.00 39.88
ATOM  1425  CD2 LEU  347      60.483  12.864  13.738  1.00 27.65
ATOM  1426  C   LEU  347      60.611  16.535  11.998  1.00 23.22
ATOM  1427  O   LEU  347      61.468  16.133  11.211  1.00 28.58
ATOM  1428  N   ALA  348      59.784  17.542  11.731  1.00 26.40
ATOM  1429  CA  ALA  348      59.840  18.273  10.474  1.00 23.85
ATOM  1430  CB  ALA  348      58.732  19.324  10.433  1.00 25.27
ATOM  1431  C   ALA  348      61.210  18.924  10.337  1.00 23.69
ATOM  1432  O   ALA  348      61.847  18.835   9.288  1.00 29.11
ATOM  1433  N   PHE  349      61.678  19.506  11.438  1.00 24.71
ATOM  1434  CA  PHE  349      62.973  20.181  11.493  1.00 20.48
ATOM  1435  CB  PHE  349      63.164  20.772  12.900  1.00 17.84
ATOM  1436  CG  PHE  349      64.334  21.721  13.031  1.00 14.90
ATOM  1437  CD1 PHE  349      65.109  22.069  11.933  1.00 17.58
ATOM  1438  CD2 PHE  349      64.651  22.269  14.271  1.00 24.77
ATOM  1439  CE1 PHE  349      66.185  22.944  12.063  1.00 20.26
ATOM  1440  CE2 PHE  349      65.727  23.147  14.413  1.00 23.83
ATOM  1441  CZ  PHE  349      66.494  23.486  13.299  1.00 20.36
ATOM  1442  C   PHE  349      64.084  19.181  11.159  1.00 23.43
ATOM  1443  O   PHE  349      64.916  19.427  10.278  1.00 24.35
ATOM  1444  N   GLU  350      64.057  18.028  11.820  1.00 25.79
ATOM  1445  CA  GLU  350      65.060  16.991  11.606  1.00 26.75
ATOM  1446  CB  GLU  350      64.813  15.822  12.567  1.00 29.56
ATOM  1447  CG  GLU  350      65.774  14.661  12.391  1.00 39.94
ATOM  1448  CD  GLU  350      65.574  13.549  13.407  1.00 45.06
ATOM  1449  OE1 GLU  350      64.413  13.192  13.715  1.00 49.26
ATOM  1450  OE2 GLU  350      66.593  13.017  13.887  1.00 56.67
ATOM  1451  C   GLU  350      65.051  16.494  10.162  1.00 26.95
ATOM  1452  O   GLU  350      66.096  16.398   9.513  1.00 28.77
ATOM  1453  N   HIS  351      63.858  16.219   9.652  1.00 22.56
ATOM  1454  CA  HIS  351      63.699  15.728   8.294  1.00 22.20
ATOM  1455  CB  HIS  351      62.263  15.265   8.083  1.00 22.47
ATOM  1456  CG  HIS  351      61.881  14.106   8.947  1.00 23.61
ATOM  1457  CD2 HIS  351      62.633  13.300   9.739  1.00 27.65
ATOM  1458  ND1 HIS  351      60.585  13.653   9.069  1.00 26.13
ATOM  1459  CE1 HIS  351      60.548  12.629   9.898  1.00 22.87
ATOM  1460  NE2 HIS  351      61.779  12.393  10.319  1.00 27.53
ATOM  1461  C   HIS  351      64.135  16.764   7.259  1.00 21.76
```

ATOM 1462 O HIS 351 64.708 16.419 6.226 1.00 27.02
ATOM 1463 N TYR 352 63.909 18.041 7.555 1.00 18.26
ATOM 1464 CA TYR 352 64.327 19.101 6.649 1.00 16.94
ATOM 1465 CB TYR 352 63.749 20.455 7.066 1.00 19.07
ATOM 1466 CG TYR 352 64.107 21.534 6.081 1.00 21.11
ATOM 1467 CD1 TYR 352 63.518 21.564 4.819 1.00 21.33
ATOM 1468 CE1 TYR 352 63.921 22.482 3.859 1.00 21.06
ATOM 1469 CD2 TYR 352 65.105 22.462 6.367 1.00 22.07
ATOM 1470 CE2 TYR 352 65.515 23.388 5.412 1.00 25.40
ATOM 1471 CZ TYR 352 64.921 23.384 4.161 1.00 21.90
ATOM 1472 OH TYR 352 65.334 24.268 3.197 1.00 23.57
ATOM 1473 C TYR 352 65.853 19.156 6.657 1.00 18.49
ATOM 1474 O TYR 352 66.487 19.323 5.609 1.00 24.99
ATOM 1475 N VAL 353 66.451 19.008 7.836 1.00 24.64
ATOM 1476 CA VAL 353 67.904 19.011 7.955 1.00 22.20
ATOM 1477 CB VAL 353 68.350 18.925 9.440 1.00 23.72
ATOM 1478 CG1 VAL 353 69.838 18.597 9.546 1.00 21.24
ATOM 1479 CG2 VAL 353 68.063 20.245 10.142 1.00 20.07
ATOM 1480 C VAL 353 68.452 17.829 7.146 1.00 25.07
ATOM 1481 O VAL 353 69.467 17.955 6.457 1.00 24.75
ATOM 1482 N ASN 354 67.768 16.690 7.221 1.00 24.59
ATOM 1483 CA ASN 354 68.171 15.502 6.474 1.00 25.64
ATOM 1484 CB ASN 354 67.223 14.331 6.751 1.00 26.05
ATOM 1485 CG ASN 354 67.368 13.763 8.151 1.00 30.27
ATOM 1486 OD1 ASN 354 66.443 13.139 8.672 1.00 33.71
ATOM 1487 ND2 ASN 354 68.529 13.959 8.765 1.00 34.78
ATOM 1488 C ASN 354 68.143 15.813 4.981 1.00 30.50
ATOM 1489 O ASN 354 69.042 15.423 4.233 1.00 33.73
ATOM 1490 N HIS 355 67.098 16.519 4.555 1.00 30.54
ATOM 1491 CA HIS 355 66.926 16.901 3.157 1.00 26.02
ATOM 1492 CB HIS 355 65.535 17.521 2.953 1.00 29.93
ATOM 1493 CG HIS 355 65.367 18.217 1.638 1.00 37.91
ATOM 1494 CD2 HIS 355 65.654 19.486 1.264 1.00 31.26
ATOM 1495 ND1 HIS 355 64.861 17.593 0.518 1.00 32.67
ATOM 1496 CE1 HIS 355 64.843 18.447 -0.488 1.00 33.22
ATOM 1497 NE2 HIS 355 65.322 19.601 -0.061 1.00 32.69
ATOM 1498 C HIS 355 68.009 17.851 2.652 1.00 24.29
ATOM 1499 O HIS 355 68.381 17.798 1.484 1.00 26.82
ATOM 1500 N ARG 356 68.484 18.735 3.526 1.00 29.72
ATOM 1501 CA ARG 356 69.516 19.711 3.167 1.00 26.65
ATOM 1502 CB ARG 356 69.593 20.804 4.225 1.00 22.74
ATOM 1503 CG ARG 356 68.409 21.735 4.222 1.00 21.64
ATOM 1504 CD ARG 356 68.757 23.024 3.524 1.00 28.04
ATOM 1505 NE ARG 356 69.550 23.900 4.380 1.00 33.79
ATOM 1506 CZ ARG 356 70.508 24.716 3.952 1.00 29.26
ATOM 1507 NH1 ARG 356 70.814 24.776 2.667 1.00 29.08
ATOM 1508 NH2 ARG 356 71.136 25.493 4.816 1.00 33.61

ATOM 1509 C ARG 356 70.904 19.115 2.950 1.00 27.58
ATOM 1510 O ARG 356 71.757 19.740 2.312 1.00 31.44
ATOM 1511 N LYS 357 71.140 17.937 3.519 1.00 30.56
ATOM 1512 CA LYS 357 72.422 17.244 3.390 1.00 34.56
ATOM 1513 CB LYS 357 72.500 16.518 2.043 1.00 39.66
ATOM 1514 CG LYS 357 71.476 15.402 1.871 1.00 42.16
ATOM 1515 CD LYS 357 71.674 14.676 0.550 1.00 54.23
ATOM 1516 CE LYS 357 70.691 13.523 0.371 1.00 61.97
ATOM 1517 NZ LYS 357 69.288 13.974 0.162 1.00 65.88
ATOM 1518 C LYS 357 73.665 18.119 3.606 1.00 36.73
ATOM 1519 O LYS 357 74.522 18.248 2.728 1.00 40.70
ATOM 1520 N HIS 358 73.738 18.732 4.786 1.00 33.69
ATOM 1521 CA HIS 358 74.863 19.581 5.163 1.00 33.59
ATOM 1522 CB HIS 358 74.660 20.155 6.571 1.00 32.07
ATOM 1523 CG HIS 358 73.593 21.200 6.666 1.00 29.74
ATOM 1524 CD2 HIS 358 72.245 21.098 6.736 1.00 23.35
ATOM 1525 ND1 HIS 358 73.876 22.547 6.731 1.00 28.13
ATOM 1526 CE1 HIS 358 72.752 23.231 6.834 1.00 26.94
ATOM 1527 NE2 HIS 358 71.747 22.373 6.838 1.00 23.32
ATOM 1528 C HIS 358 76.121 18.720 5.180 1.00 37.98
ATOM 1529 O HIS 358 76.087 17.581 5.654 1.00 41.07
ATOM 1530 N ASN 359 77.231 19.261 4.690 1.00 44.20
ATOM 1531 CA ASN 359 78.492 18.523 4.676 1.00 49.72
ATOM 1532 CB ASN 359 79.406 19.053 3.572 1.00 46.66
ATOM 1533 C ASN 359 79.174 18.648 6.039 1.00 51.77
ATOM 1534 O ASN 359 80.356 18.985 6.122 1.00 57.32
ATOM 1535 N ILE 360 78.414 18.383 7.101 1.00 51.04
ATOM 1536 CA ILE 360 78.906 18.471 8.477 1.00 48.24
ATOM 1537 CB ILE 360 78.340 19.721 9.207 1.00 47.20
ATOM 1538 CG2 ILE 360 78.781 19.741 10.673 1.00 43.50
ATOM 1539 CG1 ILE 360 78.777 21.005 8.491 1.00 45.94
ATOM 1540 CD1 ILE 360 78.157 22.262 9.050 1.00 43.00
ATOM 1541 C ILE 360 78.462 17.222 9.239 1.00 47.23
ATOM 1542 O ILE 360 77.272 16.901 9.278 1.00 45.13
ATOM 1543 N PRO 361 79.416 16.490 9.838 1.00 48.61
ATOM 1544 CD PRO 361 80.869 16.705 9.729 1.00 50.93
ATOM 1545 CA PRO 361 79.129 15.270 10.599 1.00 45.46
ATOM 1546 CB PRO 361 80.524 14.725 10.927 1.00 49.01
ATOM 1547 CG PRO 361 81.402 15.307 9.862 1.00 54.41
ATOM 1548 C PRO 361 78.330 15.514 11.879 1.00 36.54
ATOM 1549 O PRO 361 78.666 16.394 12.672 1.00 39.83
ATOM 1550 N HIS 362 77.282 14.716 12.075 1.00 31.35
ATOM 1551 CA HIS 362 76.430 14.798 13.264 1.00 33.34
ATOM 1552 CB HIS 362 77.246 14.495 14.524 1.00 33.77
ATOM 1553 CG HIS 362 78.129 13.292 14.397 1.00 34.40
ATOM 1554 CD2 HIS 362 77.837 11.999 14.130 1.00 32.60
ATOM 1555 ND1 HIS 362 79.501 13.362 14.506 1.00 36.14

```
ATOM   1556  CE1 HIS   362      80.017  12.160  14.311  1.00 36.26
ATOM   1557  NE2 HIS   362      79.029  11.316  14.080  1.00 35.73
ATOM   1558  C   HIS   362      75.778  16.164  13.389  1.00 33.55
ATOM   1559  O   HIS   362      75.539  16.652  14.495  1.00 31.93
ATOM   1560  N   PHE   363      75.449  16.748  12.240  1.00 35.83
ATOM   1561  CA  PHE   363      74.834  18.067  12.166  1.00 30.93
ATOM   1562  CB  PHE   363      74.464  18.394  10.712  1.00 28.82
ATOM   1563  CG  PHE   363      73.959  19.797  10.514  1.00 26.59
ATOM   1564  CD1 PHE   363      74.846  20.843  10.301  1.00 26.96
ATOM   1565  CD2 PHE   363      72.596  20.076  10.575  1.00 27.51
ATOM   1566  CE1 PHE   363      74.384  22.151  10.155  1.00 31.83
ATOM   1567  CE2 PHE   363      72.124  21.378  10.433  1.00 26.65
ATOM   1568  CZ  PHE   363      73.019  22.417  10.223  1.00 24.42
ATOM   1569  C   PHE   363      73.613  18.235  13.063  1.00 28.73
ATOM   1570  O   PHE   363      73.550  19.174  13.848  1.00 25.33
ATOM   1571  N   TRP   364      72.663  17.310  12.969  1.00 22.89
ATOM   1572  CA  TRP   364      71.443  17.405  13.760  1.00 24.19
ATOM   1573  CB  TRP   364      70.481  16.254  13.439  1.00 26.31
ATOM   1574  CG  TRP   364      69.198  16.275  14.228  1.00 20.24
ATOM   1575  CD2 TRP   364      68.213  17.325  14.262  1.00 24.50
ATOM   1576  CE2 TRP   364      67.175  16.894  15.120  1.00 25.84
ATOM   1577  CE3 TRP   364      68.106  18.583  13.652  1.00 25.83
ATOM   1578  CD1 TRP   364      68.731  15.289  15.040  1.00 23.61
ATOM   1579  NE1 TRP   364      67.515  15.648  15.579  1.00 32.26
ATOM   1580  CZ2 TRP   364      66.048  17.674  15.386  1.00 21.95
ATOM   1581  CZ3 TRP   364      66.979  19.360  13.919  1.00 20.73
ATOM   1582  CH2 TRP   364      65.967  18.899  14.779  1.00 22.37
ATOM   1583  C   TRP   364      71.663  17.551  15.267  1.00 28.84
ATOM   1584  O   TRP   364      71.246  18.554  15.839  1.00 31.25
ATOM   1585  N   PRO   365      72.305  16.568  15.932  1.00 29.69
ATOM   1586  CD  PRO   365      72.790  15.245  15.497  1.00 30.89
ATOM   1587  CA  PRO   365      72.499  16.748  17.373  1.00 25.62
ATOM   1588  CB  PRO   365      73.195  15.451  17.810  1.00 25.50
ATOM   1589  CG  PRO   365      73.804  14.915  16.560  1.00 34.15
ATOM   1590  C   PRO   365      73.320  18.002  17.698  1.00 24.07
ATOM   1591  O   PRO   365      73.079  18.654  18.711  1.00 23.58
ATOM   1592  N   LYS   366      74.250  18.365  16.820  1.00 24.09
ATOM   1593  CA  LYS   366      75.063  19.562  17.027  1.00 29.44
ATOM   1594  CB  LYS   366      76.131  19.681  15.945  1.00 27.18
ATOM   1595  CG  LYS   366      77.341  18.802  16.149  1.00 23.71
ATOM   1596  CD  LYS   366      78.304  19.019  15.001  1.00 27.50
ATOM   1597  CE  LYS   366      79.624  18.329  15.231  1.00 35.88
ATOM   1598  NZ  LYS   366      80.550  18.591  14.097  1.00 41.92
ATOM   1599  C   LYS   366      74.195  20.820  17.012  1.00 32.76
ATOM   1600  O   LYS   366      74.326  21.694  17.873  1.00 36.13
ATOM   1601  N   LEU   367      73.307  20.907  16.028  1.00 33.70
ATOM   1602  CA  LEU   367      72.409  22.041  15.905  1.00 30.60
```

ATOM 1603 CB LEU 367 71.636 21.955 14.587 1.00 24.26
ATOM 1604 CG LEU 367 70.675 23.103 14.274 1.00 32.42
ATOM 1605 CD1 LEU 367 71.394 24.440 14.404 1.00 24.78
ATOM 1606 CD2 LEU 367 70.098 22.924 12.878 1.00 28.84
ATOM 1607 C LEU 367 71.450 22.015 17.087 1.00 31.90
ATOM 1608 O LEU 367 71.113 23.052 17.655 1.00 39.20
ATOM 1609 N LEU 368 71.051 20.812 17.485 1.00 33.86
ATOM 1610 CA LEU 368 70.144 20.617 18.608 1.00 32.97
ATOM 1611 CB LEU 368 69.866 19.123 18.759 1.00 34.22
ATOM 1612 CG LEU 368 68.458 18.633 19.084 1.00 38.15
ATOM 1613 CD1 LEU 368 67.400 19.449 18.345 1.00 27.75
ATOM 1614 CD2 LEU 368 68.374 17.154 18.733 1.00 31.51
ATOM 1615 C LEU 368 70.793 21.181 19.875 1.00 35.29
ATOM 1616 O LEU 368 70.128 21.806 20.703 1.00 36.16
ATOM 1617 N MET 369 72.106 21.001 19.994 1.00 41.13
ATOM 1618 CA MET 369 72.857 21.504 21.139 1.00 40.92
ATOM 1619 CB MET 369 74.283 20.955 21.115 1.00 43.32
ATOM 1620 CG MET 369 74.383 19.497 21.545 1.00 50.01
ATOM 1621 SD MET 369 75.997 18.770 21.190 1.00 56.63
ATOM 1622 CE MET 369 77.032 19.596 22.409 1.00 62.26
ATOM 1623 C MET 369 72.872 23.032 21.186 1.00 43.46
ATOM 1624 O MET 369 73.137 23.619 22.233 1.00 47.51
ATOM 1625 N LYS 370 72.594 23.673 20.053 1.00 41.60
ATOM 1626 CA LYS 370 72.561 25.131 19.988 1.00 34.48
ATOM 1627 CB LYS 370 72.689 25.623 18.546 1.00 31.53
ATOM 1628 CG LYS 370 74.012 25.278 17.896 1.00 30.76
ATOM 1629 CD LYS 370 75.168 25.774 18.731 1.00 32.16
ATOM 1630 CE LYS 370 76.488 25.388 18.116 1.00 31.08
ATOM 1631 NZ LYS 370 77.604 25.822 18.993 1.00 51.52
ATOM 1632 C LYS 370 71.269 25.652 20.606 1.00 36.35
ATOM 1633 O LYS 370 71.197 26.806 21.032 1.00 39.02
ATOM 1634 N VAL 371 70.248 24.804 20.652 1.00 34.33
ATOM 1635 CA VAL 371 68.975 25.186 21.249 1.00 36.27
ATOM 1636 CB VAL 371 67.885 24.097 21.046 1.00 36.15
ATOM 1637 CG1 VAL 371 66.600 24.487 21.758 1.00 32.69
ATOM 1638 CG2 VAL 371 67.612 23.892 19.567 1.00 33.75
ATOM 1639 C VAL 371 69.196 25.423 22.745 1.00 41.55
ATOM 1640 O VAL 371 68.638 26.367 23.316 1.00 40.82
ATOM 1641 N THR 372 70.018 24.581 23.378 1.00 40.42
ATOM 1642 CA THR 372 70.300 24.733 24.804 1.00 41.69
ATOM 1643 CB THR 372 71.037 23.499 25.397 1.00 42.36
ATOM 1644 OG1 THR 372 72.125 23.133 24.548 1.00 53.57
ATOM 1645 CG2 THR 372 70.090 22.313 25.523 1.00 43.54
ATOM 1646 C THR 372 71.090 26.021 25.048 1.00 38.75
ATOM 1647 O THR 372 70.858 26.714 26.042 1.00 37.51
ATOM 1648 N ASP 373 71.987 26.360 24.122 1.00 36.73
ATOM 1649 CA ASP 373 72.768 27.594 24.223 1.00 30.96

ATOM 1650 CB ASP 373 73.741 27.732 23.047 1.00 31.26
ATOM 1651 CG ASP 373 74.865 26.707 23.085 1.00 35.85
ATOM 1652 OD1 ASP 373 75.523 26.508 22.042 1.00 36.73
ATOM 1653 OD2 ASP 373 75.102 26.103 24.153 1.00 39.92
ATOM 1654 C ASP 373 71.797 28.769 24.230 1.00 31.30
ATOM 1655 O- ASP 373 71.926 29.689 25.039 1.00 35.37
ATOM 1656 N LEU 374 70.804 28.711 23.348 1.00 27.72
ATOM 1657 CA LEU 374 69.783 29.751 23.257 1.00 28.18
ATOM 1658 CB LEU 374 68.881 29.521 22.042 1.00 28.41
ATOM 1659 CG LEU 374 69.391 30.055 20.703 1.00 29.87
ATOM 1660 CD1 LEU 374 68.533 29.520 19.563 1.00 25.44
ATOM 1661 CD2 LEU 374 69.385 31.581 20.728 1.00 23.74
ATOM 1662 C LEU 374 68.946 29.786 24.527 1.00 28.61
ATOM 1663 O LEU 374 68.516 30.859 24.968 1.00 29.51
ATOM 1664 N ARG 375 68.690 28.615 25.105 1.00 32.32
ATOM 1665 CA ARG 375 67.925 28.532 26.345 1.00 33.19
ATOM 1666 CB ARG 375 67.758 27.074 26.776 1.00 41.70
ATOM 1667 CG ARG 375 66.360 26.524 26.609 1.00 51.03
ATOM 1668 CD ARG 375 65.979 26.416 25.153 1.00 60.16
ATOM 1669 NE ARG 375 64.648 25.840 24.987 1.00 74.28
ATOM 1670 CZ ARG 375 64.324 24.587 25.296 1.00 79.34
ATOM 1671 NH1 ARG 375 65.233 23.756 25.796 1.00 80.84
ATOM 1672 NH2 ARG 375 63.084 24.157 25.092 1.00 77.44
ATOM 1673 C ARG 375 68.692 29.296 27.423 1.00 32.02
ATOM 1674 O ARG 375 68.132 30.150 28.108 1.00 30.42
ATOM 1675 N MET 376 69.993 29.020 27.521 1.00 32.30
ATOM 1676 CA MET 376 70.860 29.668 28.499 1.00 36.82
ATOM 1677 CB MET 376 72.278 29.097 28.433 1.00 45.36
ATOM 1678 CG MET 376 72.375 27.645 28.866 1.00 66.71
ATOM 1679 SD MET 376 74.078 27.057 28.966 1.00 89.64
ATOM 1680 CE MET 376 74.256 26.229 27.400 1.00 85.51
ATOM 1681 C MET 376 70.880 31.182 28.310 1.00 37.49
ATOM 1682 O MET 376 70.780 31.928 29.281 1.00 39.99
ATOM 1683 N ILE 377 71.008 31.630 27.060 1.00 33.14
ATOM 1684 CA ILE 377 71.009 33.057 26.740 1.00 25.98
ATOM 1685 CB ILE 377 71.181 33.291 25.211 1.00 22.79
ATOM 1686 CG2 ILE 377 70.838 34.727 24.834 1.00 25.29
ATOM 1687 CG1 ILE 377 72.606 32.947 24.785 1.00 21.42
ATOM 1688 CD1 ILE 377 72.816 32.971 23.282 1.00 19.37
ATOM 1689 C ILE 377 69.690 33.664 27.228 1.00 27.11
ATOM 1690 O ILE 377 69.676 34.727 27.856 1.00 28.09
ATOM 1691 N GLY 378 68.584 32.969 26.975 1.00 29.34
ATOM 1692 CA GLY 378 67.292 33.457 27.418 1.00 30.41
ATOM 1693 C GLY 378 67.233 33.532 28.934 1.00 36.85
ATOM 1694 O GLY 378 66.672 34.481 29.489 1.00 36.44
ATOM 1695 N ALA 379 67.837 32.547 29.603 1.00 37.98
ATOM 1696 CA ALA 379 67.869 32.483 31.066 1.00 36.44

ATOM 1697 CB ALA 379 68.415 31.133 31.528 1.00 35.63
ATOM 1698 C ALA 379 68.712 33.613 31.642 1.00 34.14
ATOM 1699 O ALA 379 68.259 34.343 32.523 1.00 35.15
ATOM 1700 N CYA 380 69.941 33.747 31.144 1.00 36.66
ATOM 1701 CA CYA 380 70.860 34.795 31.587 1.00 37.27
ATOM 1702 CB CYA 380 72.172 34.728 30.810 1.00 36.85
ATOM 1703 SG CYA 380 73.201 33.338 31.250 1.00 52.80
ATOM 1704 AS CYA 380 74.942 33.593 29.823 1.00 65.79
ATOM 1705 C CYA 380 70.230 36.165 31.398 1.00 38.70
ATOM 1706 O CYA 380 70.337 37.033 32.270 1.00 45.73
ATOM 1707 N HIS 381 69.555 36.354 30.265 1.00 37.32
ATOM 1708 CA HIS 381 68.906 37.623 29.994 1.00 32.11
ATOM 1709 CB HIS 381 68.377 37.687 28.565 1.00 25.76
ATOM 1710 CG HIS 381 67.596 38.932 28.285 1.00 20.30
ATOM 1711 CD2 HIS 381 67.998 40.200 28.044 1.00 16.31
ATOM 1712 ND1 HIS 381 66.218 38.971 28.336 1.00 22.06
ATOM 1713 CE1 HIS 381 65.807 40.210 28.146 1.00 21.20
ATOM 1714 NE2 HIS 381 66.869 40.976 27.968 1.00 22.58
ATOM 1715 C HIS 381 67.773 37.893 30.980 1.00 32.68
ATOM 1716 O HIS 381 67.602 39.024 31.431 1.00 33.38
ATOM 1717 N ALA 382 66.982 36.873 31.296 1.00 31.27
ATOM 1718 CA ALA 382 65.884 37.045 32.243 1.00 29.39
ATOM 1719 CB ALA 382 65.121 35.742 32.409 1.00 25.18
ATOM 1720 C ALA 382 66.420 37.531 33.596 1.00 34.32
ATOM 1721 O ALA 382 65.902 38.501 34.160 1.00 37.79
ATOM 1722 N SER 383 67.483 36.893 34.085 1.00 36.88
ATOM 1723 CA SER 383 68.100 37.268 35.361 1.00 39.74
ATOM 1724 CB SER 383 69.233 36.297 35.719 1.00 42.58
ATOM 1725 OG SER 383 68.734 35.010 36.049 1.00 61.85
ATOM 1726 C SER 383 68.638 38.697 35.311 1.00 36.49
ATOM 1727 O SER 383 68.443 39.480 36.243 1.00 43.81
ATOM 1728 N ARG 384 69.305 39.036 34.213 1.00 33.66
ATOM 1729 CA ARG 384 69.866 40.367 34.043 1.00 35.39
ATOM 1730 CB ARG 384 70.800 40.404 32.835 1.00 29.29
ATOM 1731 CG ARG 384 71.590 41.679 32.731 1.00 29.20
ATOM 1732 CD ARG 384 72.881 41.435 31.995 1.00 37.73
ATOM 1733 NE ARG 384 73.657 42.663 31.850 1.00 48.97
ATOM 1734 CZ ARG 384 74.346 43.245 32.826 1.00 45.41
ATOM 1735 NH1 ARG 384 74.371 42.715 34.038 1.00 44.51
ATOM 1736 NH2 ARG 384 75.008 44.368 32.584 1.00 41.43
ATOM 1737 C ARG 384 68.777 41.431 33.916 1.00 39.45
ATOM 1738 O ARG 384 68.913 42.537 34.444 1.00 44.47
ATOM 1739 N PHE 385 67.673 41.077 33.270 1.00 36.42
ATOM 1740 CA PHE 385 66.568 42.007 33.099 1.00 34.68
ATOM 1741 CB PHE 385 65.444 41.393 32.262 1.00 30.21
ATOM 1742 CG PHE 385 64.263 42.304 32.081 1.00 29.48
ATOM 1743 CD1 PHE 385 64.289 43.313 31.127 1.00 29.70

ATOM 1744 CD2 PHE 385 63.130 42.161 32.873 1.00 28.04
ATOM 1745 CE1 PHE 385 63.203 44.169 30.966 1.00 33.50
ATOM 1746 CE2 PHE 385 62.040 43.012 32.718 1.00 31.35
ATOM 1747 CZ PHE 385 62.077 44.017 31.763 1.00 32.08
ATOM 1748 C PHE 385 66.040 42.412 34.468 1.00 35.76
ATOM 1749 O- PHE 385 65.761 43.590 34.693 1.00 40.58
ATOM 1750 N LEU 386 65.906 41.441 35.373 1.00 37.55
ATOM 1751 CA LEU 386 65.429 41.706 36.735 1.00 41.01
ATOM 1752 CB LEU 386 65.394 40.413 37.563 1.00 42.30
ATOM 1753 CG LEU 386 64.240 39.434 37.317 1.00 43.34
ATOM 1754 CD1 LEU 386 64.559 38.066 37.912 1.00 43.50
ATOM 1755 CD2 LEU 386 62.946 39.992 37.899 1.00 44.01
ATOM 1756 C LEU 386 66.342 42.735 37.405 1.00 40.08
ATOM 1757 O LEU 386 65.875 43.632 38.112 1.00 42.08
ATOM 1758 N HIS 387 67.643 42.613 37.153 1.00 34.86
ATOM 1759 CA HIS 387 68.631 43.537 37.700 1.00 39.09
ATOM 1760 CB HIS 387 70.046 43.034 37.421 1.00 39.99
ATOM 1761 CG HIS 387 70.402 41.791 38.172 1.00 56.37
ATOM 1762 CD2 HIS 387 71.384 40.881 37.974 1.00 60.11
ATOM 1763 ND1 HIS 387 69.711 41.370 39.290 1.00 60.40
ATOM 1764 CE1 HIS 387 70.252 40.255 39.746 1.00 61.89
ATOM 1765 NE2 HIS 387 71.269 39.937 38.966 1.00 63.96
ATOM 1766 C HIS 387 68.446 44.928 37.101 1.00 41.00
ATOM 1767 O HIS 387 68.492 45.927 37.817 1.00 46.99
ATOM 1768 N MET 388 68.213 44.982 35.792 1.00 39.15
ATOM 1769 CA MET 388 68.011 46.243 35.088 1.00 35.32
ATOM 1770 CB MET 388 67.676 45.992 33.612 1.00 35.12
ATOM 1771 CG MET 388 68.810 45.442 32.753 1.00 37.24
ATOM 1772 SD MET 388 68.259 45.150 31.051 1.00 41.75
ATOM 1773 CE MET 388 69.274 43.748 30.573 1.00 35.23
ATOM 1774 C MET 388 66.880 47.048 35.733 1.00 36.52
ATOM 1775 O MET 388 66.994 48.265 35.888 1.00 43.39
ATOM 1776 N LYS 389 65.792 46.371 36.103 1.00 38.05
ATOM 1777 CA LYS 389 64.637 47.025 36.729 1.00 42.88
ATOM 1778 CB LYS 389 63.481 46.035 36.866 1.00 47.83
ATOM 1779 CG LYS 389 62.835 45.627 35.560 1.00 52.36
ATOM 1780 CD LYS 389 62.040 44.340 35.731 1.00 61.84
ATOM 1781 CE LYS 389 60.978 44.451 36.814 1.00 69.04
ATOM 1782 NZ LYS 389 60.254 43.162 36.987 1.00 70.00
ATOM 1783 C LYS 389 64.983 47.587 38.107 1.00 43.99
ATOM 1784 O LYS 389 64.455 48.621 38.525 1.00 44.22
ATOM 1785 N VAL 390 65.851 46.878 38.816 1.00 45.50
ATOM 1786 CA VAL 390 66.290 47.286 40.142 1.00 47.76
ATOM 1787 CB VAL 390 67.152 46.186 40.804 1.00 46.30
ATOM 1788 CG1 VAL 390 67.796 46.706 42.079 1.00 49.20
ATOM 1789 CG2 VAL 390 66.305 44.962 41.097 1.00 42.69
ATOM 1790 C VAL 390 67.109 48.571 40.070 1.00 47.25

ATOM 1791 O VAL 390 66.811 49.540 40.760 1.00 48.67
ATOM 1792 N GLU 391 68.115 48.580 39.199 1.00 44.11
ATOM 1793 CA GLU 391 69.009 49.721 39.047 1.00 45.79
ATOM 1794 CB GLU 391 70.266 49.311 38.273 1.00 45.78
ATOM 1795 CG GLU 391 70.998 48.091 38.830 1.00 57.29
ATOM 1796 CD GLU 391 71.479 48.268 40.261 1.00 61.20
ATOM 1797 OE1 GLU 391 71.845 49.400 40.646 1.00 57.29
ATOM 1798 OE2 GLU 391 71.496 47.263 41.001 1.00 63.69
ATOM 1799 C GLU 391 68.410 50.959 38.391 1.00 49.16
ATOM 1800 O GLU 391 68.463 52.055 38.956 1.00 58.82
ATOM 1801 N CYA 392 67.802 50.782 37.224 1.00 49.75
ATOM 1802 CA CYA 392 67.255 51.908 36.475 1.00 45.56
ATOM 1803 CB CYA 392 67.667 51.768 35.016 1.00 44.82
ATOM 1804 SG CYA 392 69.443 51.771 34.913 1.00 50.78
ATOM 1805 AS CYA 392 69.929 50.778 33.022 1.00 53.29
ATOM 1806 C CYA 392 65.771 52.200 36.601 1.00 44.35
ATOM 1807 O CYA 392 64.988 51.324 36.962 1.00 44.10
ATOM 1808 N PRO 393 65.378 53.469 36.365 1.00 45.52
ATOM 1809 CD PRO 393 66.275 54.603 36.075 1.00 37.38
ATOM 1810 CA PRO 393 63.982 53.916 36.444 1.00 45.41
ATOM 1811 CB PRO 393 64.105 55.438 36.376 1.00 43.33
ATOM 1812 CG PRO 393 65.329 55.644 35.542 1.00 39.89
ATOM 1813 C PRO 393 63.108 53.376 35.318 1.00 44.89
ATOM 1814 O PRO 393 63.556 53.239 34.175 1.00 45.60
ATOM 1815 N THR 394 61.843 53.135 35.647 1.00 47.52
ATOM 1816 CA THR 394 60.853 52.603 34.713 1.00 53.06
ATOM 1817 CB THR 394 59.459 52.583 35.371 1.00 61.06
ATOM 1818 OG1 THR 394 59.609 52.470 36.794 1.00 72.44
ATOM 1819 CG2 THR 394 58.640 51.401 34.860 1.00 61.05
ATOM 1820 C THR 394 60.767 53.373 33.392 1.00 49.98
ATOM 1821 O THR 394 60.507 52.786 32.339 1.00 51.06
ATOM 1822 N GLU 395 61.024 54.676 33.452 1.00 48.55
ATOM 1823 CA GLU 395 60.970 55.548 32.282 1.00 44.21
ATOM 1824 CB GLU 395 61.258 56.987 32.697 1.00 41.66
ATOM 1825 C GLU 395 61.899 55.134 31.134 1.00 43.46
ATOM 1826 O GLU 395 61.684 55.527 29.988 1.00 44.17
ATOM 1827 N LEU 396 62.934 54.359 31.449 1.00 41.05
ATOM 1828 CA LEU 396 63.898 53.899 30.448 1.00 39.55
ATOM 1829 CB LEU 396 65.270 53.708 31.106 1.00 35.03
ATOM 1830 CG LEU 396 66.296 54.834 30.945 1.00 40.06
ATOM 1831 CD1 LEU 396 65.638 56.200 31.055 1.00 39.06
ATOM 1832 CD2 LEU 396 67.398 54.669 31.978 1.00 32.78
ATOM 1833 C LEU 396 63.468 52.602 29.757 1.00 38.50
ATOM 1834 O LEU 396 64.106 52.150 28.804 1.00 34.72
ATOM 1835 N PHE 397 62.364 52.028 30.225 1.00 38.76
ATOM 1836 CA PHE 397 61.860 50.774 29.683 1.00 36.57
ATOM 1837 CB PHE 397 61.610 49.775 30.819 1.00 33.96

ATOM 1838 CG PHE 397 62.842 49.421 31.607 1.00 36.95
ATOM 1839 CD1 PHE 397 63.331 50.280 32.587 1.00 34.61
ATOM 1840 CD2 PHE 397 63.523 48.234 31.362 1.00 37.14
ATOM 1841 CE1 PHE 397 64.481 49.964 33.310 1.00 31.57
ATOM 1842 CE2 PHE 397 64.675 47.908 32.082 1.00 37.85
ATOM 1843 CZ PHE 397 65.153 48.776 33.056 1.00 33.08
ATOM 1844 C PHE 397 60.584 50.921 28.858 1.00 35.65
ATOM 1845 O PHE 397 59.519 51.249 29.399 1.00 35.75
ATOM 1846 N PRO 398 60.672 50.685 27.536 1.00 35.78
ATOM 1847 CD PRO 398 61.891 50.367 26.767 1.00 32.81
ATOM 1848 CA PRO 398 59.503 50.786 26.658 1.00 33.94
ATOM 1849 CB PRO 398 60.041 50.297 25.315 1.00 33.91
ATOM 1850 CG PRO 398 61.488 50.707 25.356 1.00 33.09
ATOM 1851 C PRO 398 58.434 49.840 27.210 1.00 34.98
ATOM 1852 O PRO 398 58.753 48.729 27.654 1.00 35.76
ATOM 1853 N PRO 399 57.163 50.267 27.219 1.00 37.67
ATOM 1854 CD PRO 399 56.661 51.578 26.776 1.00 38.02
ATOM 1855 CA PRO 399 56.070 49.433 27.733 1.00 36.86
ATOM 1856 CB PRO 399 54.803 50.183 27.291 1.00 34.14
ATOM 1857 CG PRO 399 55.282 51.240 26.310 1.00 37.00
ATOM 1858 C PRO 399 56.085 47.970 27.273 1.00 37.06
ATOM 1859 O PRO 399 55.967 47.063 28.099 1.00 37.07
ATOM 1860 N LEU 400 56.299 47.738 25.980 1.00 35.13
ATOM 1861 CA LEU 400 56.327 46.374 25.445 1.00 35.86
ATOM 1862 CB LEU 400 56.314 46.385 23.914 1.00 31.49
ATOM 1863 CG LEU 400 56.181 45.017 23.227 1.00 30.73
ATOM 1864 CD1 LEU 400 54.901 44.330 23.674 1.00 21.35
ATOM 1865 CD2 LEU 400 56.197 45.183 21.720 1.00 25.42
ATOM 1866 C LEU 400 57.542 45.597 25.958 1.00 36.51
ATOM 1867 O LEU 400 57.458 44.392 26.219 1.00 37.47
ATOM 1868 N PHE 401 58.671 46.290 26.095 1.00 32.26
ATOM 1869 CA PHE 401 59.899 45.682 26.596 1.00 35.15
ATOM 1870 CB PHE 401 61.014 46.739 26.648 1.00 35.99
ATOM 1871 CG PHE 401 62.346 46.213 27.117 1.00 39.41
ATOM 1872 CD1 PHE 401 62.845 45.003 26.639 1.00 35.94
ATOM 1873 CD2 PHE 401 63.119 46.944 28.019 1.00 40.55
ATOM 1874 CE1 PHE 401 64.088 44.531 27.055 1.00 30.16
ATOM 1875 CE2 PHE 401 64.367 46.478 28.439 1.00 35.53
ATOM 1876 CZ PHE 401 64.849 45.271 27.952 1.00 36.39
ATOM 1877 C PHE 401 59.607 45.129 27.996 1.00 36.42
ATOM 1878 O PHE 401 59.957 43.995 28.317 1.00 36.71
ATOM 1879 N LEU 402 58.920 45.925 28.805 1.00 36.59
ATOM 1880 CA LEU 402 58.561 45.528 30.158 1.00 37.68
ATOM 1881 CB LEU 402 57.986 46.720 30.917 1.00 40.71
ATOM 1882 CG LEU 402 58.963 47.751 31.463 1.00 43.13
ATOM 1883 CD1 LEU 402 58.180 48.926 32.031 1.00 39.88
ATOM 1884 CD2 LEU 402 59.847 47.103 32.527 1.00 38.39

ATOM 1885 C LEU 402 57.521 44.420 30.164 1.00 38.02
ATOM 1886 O LEU 402 57.582 43.507 30.984 1.00 37.39
ATOM 1887 N GLU 403 56.558 44.522 29.251 1.00 39.74
ATOM 1888 CA GLU 403 55.469 43.559 29.166 1.00 42.79
ATOM 1889 CB GLU 403 54.445 44.022 28.129 1.00 46.21
ATOM 1890 CG GLU 403 53.092 43.330 28.232 1.00 56.88
ATOM 1891 CD GLU 403 52.090 43.833 27.202 1.00 65.21
ATOM 1892 OE1 GLU 403 52.230 44.983 26.728 1.00 70.60
ATOM 1893 OE2 GLU 403 51.154 43.073 26.870 1.00 70.53
ATOM 1894 C GLU 403 55.890 42.121 28.886 1.00 40.14
ATOM 1895 O GLU 403 55.368 41.200 29.506 1.00 40.57
ATOM 1896 N VAL 404 56.835 41.932 27.966 1.00 39.43
ATOM 1897 CA VAL 404 57.292 40.586 27.610 1.00 40.96
ATOM 1898 CB VAL 404 57.851 40.516 26.159 1.00 35.50
ATOM 1899 CG1 VAL 404 56.807 40.995 25.177 1.00 43.46
ATOM 1900 CG2 VAL 404 59.132 41.321 26.030 1.00 25.74
ATOM 1901 C VAL 404 58.317 39.946 28.536 1.00 41.94
ATOM 1902 O VAL 404 58.468 38.722 28.533 1.00 43.82
ATOM 1903 N PHE 405 59.026 40.759 29.310 1.00 39.84
ATOM 1904 CA PHE 405 60.051 40.223 30.189 1.00 42.73
ATOM 1905 CB PHE 405 61.401 40.897 29.913 1.00 36.85
ATOM 1906 CG PHE 405 61.963 40.596 28.551 1.00 33.23
ATOM 1907 CD1 PHE 405 62.283 41.625 27.672 1.00 33.90
ATOM 1908 CD2 PHE 405 62.157 39.281 28.138 1.00 31.62
ATOM 1909 CE1 PHE 405 62.786 41.351 26.399 1.00 39.16
ATOM 1910 CE2 PHE 405 62.657 38.997 26.872 1.00 33.33
ATOM 1911 CZ PHE 405 62.972 40.033 25.999 1.00 31.99
ATOM 1912 C PHE 405 59.723 40.273 31.676 1.00 43.97
ATOM 1913 O PHE 405 60.636 39.943 32.460 1.00 46.56
ATOM 1 O1 HOH 501 67.928 36.755 11.188 1.00 33.04
ATOM 2 O1 HOH 502 69.618 40.719 13.009 1.00 23.00
ATOM 3 O1 HOH 503 64.885 40.168 12.340 1.00 23.00
ATOM 4 O1 HOH 504 63.079 40.108 15.841 1.00 23.00
ATOM 5 O1 HOH 505 63.404 46.536 15.354 1.00 36.41
ATOM 6 O1 HOH 506 61.299 15.617 -0.595 1.00 23.00
ATOM 7 O1 HOH 507 67.359 15.375 0.551 1.00 23.00
ATOM 8 O1 HOH 508 67.230 12.002 -0.634 1.00 23.00
ATOM 9 O1 HOH 509 66.906 12.467 3.855 1.00 23.00
ATOM 10 O1 HOH 510 61.785 9.946 3.983 1.00 23.00
ATOM 11 O1 HOH 511 57.670 11.385 9.909 1.00 23.00
ATOM 12 O1 HOH 512 55.791 11.570 10.291 1.00 23.00
ATOM 13 O1 HOH 513 54.637 14.058 9.201 1.00 23.00
ATOM 14 O1 HOH 514 55.882 16.054 12.204 1.00 26.53
ATOM 15 O1 HOH 515 53.685 15.842 18.209 1.00 23.00
ATOM 16 O1 HOH 516 49.559 24.773 19.020 1.00 23.00
ATOM 17 O1 HOH 517 51.258 25.512 13.384 1.00 37.74
ATOM 18 O1 HOH 518 53.551 25.749 10.593 1.00 42.31

ATOM	19	O1	HOH	519	50.338	23.299	7.662	1.00	41.19
ATOM	20	O1	HOH	520	50.830	20.272	8.323	1.00	28.46
ATOM	21	O1	HOH	521	48.630	20.291	6.429	1.00	23.00
ATOM	22	O1	HOH	522	49.233	17.389	2.867	1.00	23.00
ATOM	23	O1	HOH	523	52.076	22.770	1.260	1.00	23.00
ATOM	24	O1	HOH	524	51.671	23.621	-1.020	1.00	23.00
ATOM	25	O1	HOH	525	58.294	31.509	2.147	1.00	31.83
ATOM	26	O1	HOH	526	57.497	36.071	2.268	1.00	23.00
ATOM	27	O1	HOH	527	65.373	36.025	6.809	1.00	23.00
ATOM	28	O1	HOH	528	67.871	36.399	6.419	1.00	66.52
ATOM	29	O1	HOH	529	67.189	33.811	9.409	1.00	23.00
ATOM	30	O1	HOH	530	62.458	48.056	13.590	1.00	23.00
ATOM	31	O1	HOH	531	63.943	46.824	10.638	1.00	39.26
ATOM	32	O1	HOH	532	57.465	45.867	13.186	1.00	23.00
ATOM	33	O1	HOH	533	55.223	40.774	10.959	1.00	23.00
ATOM	34	O1	HOH	534	53.737	44.032	19.560	1.00	23.00
ATOM	35	O1	HOH	535	55.982	49.757	24.168	1.00	23.00
ATOM	36	O1	HOH	536	58.575	52.330	31.881	1.00	23.00
ATOM	37	O1	HOH	537	62.563	49.327	37.804	1.00	23.00
ATOM	38	O1	HOH	538	61.736	40.280	35.059	1.00	60.53
ATOM	39	O1	HOH	539	63.271	38.155	34.156	1.00	52.21
ATOM	40	O1	HOH	540	61.872	35.187	29.990	1.00	23.00
ATOM	41	O1	HOH	541	63.701	36.808	28.720	1.00	23.00
ATOM	42	O1	HOH	542	62.255	35.864	26.425	1.00	26.69
ATOM	43	O1	HOH	543	63.567	33.453	25.308	1.00	44.90
ATOM	44	O1	HOH	544	65.456	30.135	27.713	1.00	23.00
ATOM	45	O1	HOH	545	61.997	26.566	24.157	1.00	23.00
ATOM	46	O1	HOH	546	61.422	22.231	24.358	1.00	23.00
ATOM	47	O1	HOH	547	59.636	21.462	25.378	1.00	23.00
ATOM	48	O1	HOH	548	64.860	21.210	22.578	1.00	23.00
ATOM	49	O1	HOH	549	63.316	14.964	15.508	1.00	52.55
ATOM	50	O1	HOH	550	62.770	10.707	15.710	1.00	48.78
ATOM	51	O1	HOH	551	61.579	9.665	12.081	1.00	23.00
ATOM	52	O1	HOH	552	65.916	11.929	11.639	1.00	23.00
ATOM	53	O1	HOH	553	68.086	12.882	11.226	1.00	23.00
ATOM	54	O1	HOH	554	69.504	11.968	14.083	1.00	23.00
ATOM	55	O1	HOH	555	72.311	15.121	10.552	1.00	23.00
ATOM	56	O1	HOH	556	74.716	15.172	10.253	1.00	23.00
ATOM	57	O1	HOH	557	73.109	17.916	7.451	1.00	23.00
ATOM	58	O1	HOH	558	71.316	15.446	7.652	1.00	23.00
ATOM	59	O1	HOH	559	74.717	14.555	5.957	1.00	23.00
ATOM	60	O1	HOH	560	73.523	22.311	2.467	1.00	23.00
ATOM	61	O1	HOH	561	76.491	23.094	5.700	1.00	51.34
ATOM	62	O1	HOH	562	73.961	29.841	10.035	1.00	33.87
ATOM	63	O1	HOH	563	76.164	33.031	11.370	1.00	23.00
ATOM	64	O1	HOH	564	77.193	34.039	9.712	1.00	37.14
ATOM	65	O1	HOH	565	76.525	41.395	10.460	1.00	23.00

ATOM	66	O1	HOH	566	79.358	49.535	15.048	1.00	53.78
ATOM	67	O1	HOH	567	78.046	53.530	9.188	1.00	23.00
ATOM	68	O1	HOH	568	68.058	52.158	15.548	1.00	23.00
ATOM	69	O1	HOH	569	68.598	53.164	18.083	1.00	45.72
ATOM	70	O1	HOH	570	73.482	58.914	21.552	1.00	58.99
ATOM	71	O1	HOH	571	65.648	53.551	26.240	1.00	23.00
ATOM	72	O1	HOH	572	75.776	46.207	30.367	1.00	33.32
ATOM	73	O1	HOH	573	78.686	46.470	31.087	1.00	23.00
ATOM	74	O1	HOH	574	77.580	41.209	31.884	1.00	23.00
ATOM	75	O1	HOH	575	76.879	31.531	24.067	1.00	23.00
ATOM	76	O1	HOH	576	77.927	29.163	20.647	1.00	23.00
ATOM	77	O1	HOH	577	80.180	24.963	17.233	1.00	53.36
ATOM	78	O1	HOH	578	80.631	25.802	15.508	1.00	23.00
ATOM	79	O1	HOH	579	82.104	22.566	14.156	1.00	23.00
ATOM	80	O1	HOH	580	76.954	22.077	18.425	1.00	46.50
ATOM	81	O1	HOH	581	86.619	37.903	16.945	1.00	47.66
ATOM	82	O1	HOH	582	83.586	42.305	18.576	1.00	23.00
ATOM	83	O1	HOH	583	83.481	45.262	19.526	1.00	23.00
ATOM	84	O1	HOH	584	66.787	32.864	33.796	1.00	23.00
ATOM	85	O1	HOH	585	59.447	33.572	30.734	1.00	23.00
ATOM	86	O1	HOH	586	57.013	32.278	31.125	1.00	23.00
ATOM	87	O1	HOH	587	58.084	29.428	24.648	1.00	24.06
ATOM	88	O1	HOH	588	52.774	25.054	32.650	1.00	57.81
ATOM	89	O1	HOH	589	53.800	24.465	34.834	1.00	23.00
ATOM	90	O1	HOH	590	47.195	30.205	30.414	1.00	23.00
ATOM	91	O1	HOH	591	48.978	35.051	30.228	1.00	23.00
ATOM	92	O1	HOH	592	49.280	39.962	31.041	1.00	23.00
ATOM	93	O1	HOH	593	42.329	32.230	20.993	1.00	23.00
ATOM	94	O1	HOH	594	44.199	32.910	19.088	1.00	23.00
ATOM	95	O1	HOH	595	41.542	27.336	19.178	1.00	23.00
ATOM	96	O1	HOH	596	48.971	31.296	14.022	1.00	23.00
ATOM	97	O1	HOH	597	50.180	31.092	7.307	1.00	23.00
ATOM	98	O1	HOH	598	64.465	28.209	3.208	1.00	45.35
ATOM	99	O1	HOH	599	67.740	26.910	1.986	1.00	23.00
ATOM	100	O1	HOH	600	67.958	31.203	3.532	1.00	23.00
ATOM	101	O1	HOH	601	68.885	22.721	0.234	1.00	39.53
ATOM	102	O1	HOH	602	46.735	20.335	25.877	1.00	44.92
ATOM	103	O1	HOH	603	47.359	19.644	28.494	1.00	41.57
ATOM	2300	C	ACY	701	52.555	39.909	24.622	1.00	48.75
ATOM	2301	O	ACY	701	52.351	40.361	25.771	1.00	48.92
ATOM	2302	OXT	ACY	701	53.503	39.156	24.279	1.00	50.69
ATOM	2303	CH3	ACY	701	51.543	40.314	23.527	1.00	41.32
ATOM	2304	C1	IBR	1	67.309	42.207	18.510	1.00	32.20
ATOM	2305	C2	IBR	1	68.795	43.194	23.237	1.00	29.59
ATOM	2306	C3	IBR	1	67.192	43.467	19.068	1.00	25.49
ATOM	2307	C4	IBR	1	69.096	44.270	24.011	1.00	25.67
ATOM	2308	C5	IBR	1	67.884	43.772	20.218	1.00	35.08

```
ATOM   2309  C6  IBR     1      68.489  44.345  25.356  1.00 30.87
ATOM   2310  C7  IBR     1      68.673  42.828  20.790  1.00 30.76
ATOM   2311  C8  IBR     1      67.681  43.327  25.704  1.00 29.18
ATOM   2312  C9  IBR     1      68.811  41.580  20.269  1.00 32.19
ATOM   2313  C10 IBR     1      67.383  42.244  24.921  1.00 26.78
ATOM   2314  C11 IBR     1      68.122  41.241  19.099  1.00 25.50
ATOM   2315  C12 IBR     1      67.979  42.171  23.609  1.00 24.47
ATOM   2316  C13 IBR     1      66.529  41.932  17.285  1.00 17.69
ATOM   2317  C14 IBR     1      68.730  45.450  26.287  1.00 30.43
ATOM   2318  C15 IBR     1      67.011  40.785  16.271  1.00 21.37
ATOM   2319  C16 IBR     1      67.939  46.867  25.912  1.00 23.75
ATOM   2320  C17 IBR     1      65.946  40.598  15.151  1.00 23.91
ATOM   2321  C18 IBR     1      70.126  46.087  26.069  1.00 26.02
ATOM   2322  BR1 IBR     1      67.708  45.504  20.878  1.00 34.64
ATOM   2323  BR2 IBR     1      69.927  40.301  21.039  1.00 32.01
ATOM   2324  N1  IBR     1      68.284  40.938  15.821  1.00 18.75
ATOM   2325  O1  IBR     1      67.068  43.397  26.981  1.00 26.31
ATOM   2326  O2  IBR     1      69.393  43.153  21.933  1.00 30.15
ATOM   2327  O3  IBR     1      66.368  40.592  14.004  1.00 23.29
ATOM   2328  O4  IBR     1      64.786  40.511  15.515  1.00 23.47
END
END
```

APPENDIX 6

TR_T3.PDB

```
REMARK rTR_t3 full length numbering
REMARK
REMARK Rfactor 0.221 Rfree 0.240
REMARK Resolution 5. 2.0 all reflections
REMARK conformation of MET 388 confirmed by SA_omit map
REMARK
REMARK Three cacodylate-modified cysteines (CYA)
REMARK Cya334, Cya380, Cya392
REMARK cacodylate modeled as single arsenic atom
REMARK
REMARK side chain of certain residues modeled as ALA due to poor density;
REMARK however, residue name reflects true residue for clarity
REMARK
REMARK clone obtained from Murray et. al.
REMARK deposited sequence confirmed,
REMARK differing from that reported by Thompson et. al.
REMARK in the following codons:
REMARK 281 Thr - Ala
REMARK 285 Lys - Glu
REMARK identical to that reported by Mitsuhashi et. al.
REMARK gb:RNTRAVI X07409
JRNL       AUTH   M.B. MURRAY, N.D.ZILZ, N.L.MCCREARY,M.J.MACDONALD
JRNL       AUTH 2 H.C.TOWLE
JRNL       TITL   ISOLATION AND CHARACTERIZATION OF RAT CDNA CLONES
FOR TWO
JRNL       TITL 2 DISTINCT THYROID HORMONE RECPTORS
JRNL       REF    JBC                 V. 263 25  1988
JRNL       AUTH   C.C.THOMPSON, C.WEINBERGER, R.LEBO, R.M.EVANS
JRNL       TITL   IDENTIFICATION OF A NOVEL THYROID HORMONE RECEPTOR
EXPRESSED
JRNL       TITL 2 IN THE MAMMALIAN CENTRAL NERVOUS SYSTEM
JRNL       REF    SCIENCE             V. 237     1987
JRNL       AUTH   T.MITSUHASHI,G.TENNYSON,V.NIKODEM
JRNL       TITL   NUCLEOTIDE SEQUENCE OF NOVEL CDNAS GENERATED BY
ALTERNATIVE
JRNL       TITL 2 SPLICING OF A RAT THYROID HORMONE RECEPTOR GENE
TRANSCRIPT
JRNL       REF    NUC. ACIDS. RES.    V. 16  12  1988
REMARK
ATOM      1  CB  ARG   157      68.406  10.620   7.027  1.00 41.66
ATOM      2  CG  ARG   157      69.926  10.540   6.997  1.00 44.48
ATOM      3  CD  ARG   157      70.552  11.261   8.173  1.00 47.02
ATOM      4  NE  ARG   157      70.112  10.680   9.435  1.00 49.73
```

```
ATOM      5  CZ  ARG   157      70.917  10.392  10.450  1.00 51.21
ATOM      6  NH1 ARG   157      72.223  10.629  10.361  1.00 51.79
ATOM      7  NH2 ARG   157      70.405   9.871  11.556  1.00 51.92
ATOM      8  C   ARG   157      66.308   9.993   5.774  1.00 36.48
ATOM      9  O   ARG   157      66.047  10.318   4.622  1.00 38.84
ATOM     10  N   ARG   157      68.479   9.473   4.839  1.00 41.22
ATOM     11  CA  ARG   157      67.734   9.580   6.135  1.00 39.98
ATOM     12  N   PRO   158      65.366   9.953   6.728  1.00 33.85
ATOM     13  CD  PRO   158      65.494   9.553   8.139  1.00 34.72
ATOM     14  CA  PRO   158      63.981  10.336   6.407  1.00 31.89
ATOM     15  CB  PRO   158      63.219  10.015   7.694  1.00 31.87
ATOM     16  CG  PRO   158      64.260  10.158   8.759  1.00 33.55
ATOM     17  C   PRO   158      63.758  11.783   5.947  1.00 29.77
ATOM     18  O   PRO   158      64.221  12.739   6.575  1.00 27.93
ATOM     19  N   GLU   159      63.071  11.918   4.819  1.00 26.20
ATOM     20  CA  GLU   159      62.759  13.217   4.239  1.00 24.07
ATOM     21  CB  GLU   159      62.565  13.080   2.721  1.00 22.90
ATOM     22  CG  GLU   159      63.847  12.933   1.916  1.00 22.04
ATOM     23  CD  GLU   159      64.386  14.260   1.427  1.00 22.07
ATOM     24  OE1 GLU   159      63.577  15.175   1.203  1.00 24.63
ATOM     25  OE2 GLU   159      65.612  14.389   1.240  1.00 23.54
ATOM     26  C   GLU   159      61.463  13.717   4.855  1.00 21.56
ATOM     27  O   GLU   159      60.747  12.958   5.516  1.00 21.03
ATOM     28  N   PRO   160      61.176  15.022   4.713  1.00 19.69
ATOM     29  CD  PRO   160      61.997  16.139   4.207  1.00 16.57
ATOM     30  CA  PRO   160      59.923  15.500   5.292  1.00 18.12
ATOM     31  CB  PRO   160      59.935  16.990   4.955  1.00 15.65
ATOM     32  CG  PRO   160      61.390  17.328   4.905  1.00 14.83
ATOM     33  C   PRO   160      58.741  14.782   4.626  1.00 19.79
ATOM     34  O   PRO   160      58.793  14.431   3.445  1.00 20.20
ATOM     35  N   THR   161      57.713  14.497   5.412  1.00 20.15
ATOM     36  CA  THR   161      56.525  13.846   4.901  1.00 20.73
ATOM     37  CB  THR   161      55.672  13.274   6.060  1.00 20.77
ATOM     38  OG1 THR   161      55.195  14.348   6.881  1.00 21.74
ATOM     39  CG2 THR   161      56.489  12.324   6.917  1.00 19.52
ATOM     40  C   THR   161      55.724  14.954   4.219  1.00 21.64
ATOM     41  O   THR   161      56.010  16.139   4.421  1.00 23.13
ATOM     42  N   PRO   162      54.701  14.596   3.425  1.00 21.21
ATOM     43  CD  PRO   162      54.309  13.235   3.012  1.00 19.57
ATOM     44  CA  PRO   162      53.884  15.602   2.751  1.00 21.01
ATOM     45  CB  PRO   162      52.722  14.776   2.223  1.00 19.74
ATOM     46  CG  PRO   162      53.387  13.490   1.861  1.00 20.34
ATOM     47  C   PRO   162      53.391  16.643   3.753  1.00 22.52
ATOM     48  O   PRO   162      53.508  17.851   3.526  1.00 21.68
ATOM     49  N   GLU   163      52.880  16.151   4.878  1.00 23.01
ATOM     50  CA  GLU   163      52.349  16.996   5.941  1.00 25.97
ATOM     51  CB  GLU   163      51.672  16.148   7.022  1.00 29.50
```

```
ATOM   52  CG  GLU  163      50.476  15.312   6.543  1.00 37.07
ATOM   53  CD  GLU  163      50.865  14.159   5.614  1.00 41.36
ATOM   54  OE1 GLU  163      51.937  13.544   5.828  1.00 40.11
ATOM   55  OE2 GLU  163      50.094  13.874   4.660  1.00 46.16
ATOM   56  C   GLU  163      53.415  17.879   6.581  1.00 24.92
ATOM   57  O   GLU  163      53.110  18.971   7.061  1.00 25.82
ATOM   58  N   GLU  164      54.661  17.412   6.600  1.00 22.87
ATOM   59  CA  GLU  164      55.724  18.209   7.187  1.00 21.46
ATOM   60  CB  GLU  164      56.880  17.340   7.664  1.00 21.23
ATOM   61  CG  GLU  164      56.509  16.508   8.886  1.00 20.30
ATOM   62  CD  GLU  164      57.557  15.483   9.243  1.00 20.07
ATOM   63  OE1 GLU  164      58.409  15.186   8.385  1.00 19.80
ATOM   64  OE2 GLU  164      57.532  14.977  10.385  1.00 21.00
ATOM   65  C   GLU  164      56.195  19.289   6.235  1.00 22.45
ATOM   66  O   GLU  164      56.607  20.354   6.684  1.00 23.36
ATOM   67  N   TRP  165      56.140  19.024   4.928  1.00 21.06
ATOM   68  CA  TRP  165      56.518  20.031   3.936  1.00 19.57
ATOM   69  CB  TRP  165      56.486  19.466   2.518  1.00 16.06
ATOM   70  CG  TRP  165      57.775  18.839   2.120  1.00 14.01
ATOM   71  CD2 TRP  165      59.055  19.480   2.037  1.00 13.26
ATOM   72  CE2 TRP  165      59.976  18.515   1.588  1.00 12.91
ATOM   73  CE3 TRP  165      59.507  20.779   2.300  1.00 14.44
ATOM   74  CD1 TRP  165      57.972  17.544   1.738  1.00 12.89
ATOM   75  NE1 TRP  165      59.290  17.343   1.413  1.00 12.80
ATOM   76  CZ2 TRP  165      61.328  18.805   1.388  1.00 15.06
ATOM   77  CZ3 TRP  165      60.850  21.069   2.103  1.00 14.72
ATOM   78  CH2 TRP  165      61.747  20.084   1.649  1.00 16.82
ATOM   79  C   TRP  165      55.553  21.210   4.056  1.00 18.93
ATOM   80  O   TRP  165      55.960  22.359   3.926  1.00 21.12
ATOM   81  N   ASP  166      54.279  20.922   4.307  1.00 19.33
ATOM   82  CA  ASP  166      53.262  21.963   4.483  1.00 20.35
ATOM   83  CB  ASP  166      51.864  21.353   4.672  1.00 20.22
ATOM   84  CG  ASP  166      51.302  20.748   3.386  1.00 23.36
ATOM   85  OD1 ASP  166      51.746  21.153   2.296  1.00 23.42
ATOM   86  OD2 ASP  166      50.414  19.878   3.462  1.00 21.02
ATOM   87  C   ASP  166      53.623  22.785   5.712  1.00 21.02
ATOM   88  O   ASP  166      53.627  24.013   5.654  1.00 22.56
ATOM   89  N   LEU  167      53.926  22.096   6.813  1.00 20.50
ATOM   90  CA  LEU  167      54.312  22.726   8.071  1.00 21.37
ATOM   91  CB  LEU  167      54.661  21.657   9.109  1.00 23.49
ATOM   92  CG  LEU  167      54.223  21.846  10.565  1.00 27.19
ATOM   93  CD1 LEU  167      55.312  21.291  11.453  1.00 27.70
ATOM   94  CD2 LEU  167      53.940  23.314  10.906  1.00 27.71
ATOM   95  C   LEU  167      55.541  23.602   7.839  1.00 20.72
ATOM   96  O   LEU  167      55.601  24.748   8.294  1.00 22.98
ATOM   97  N   ILE  168      56.505  23.051   7.114  1.00 18.54
ATOM   98  CA  ILE  168      57.747  23.725   6.778  1.00 18.60
```

```
ATOM   99  CB  ILE  168      58.671  22.771   5.995  1.00 17.54
ATOM  100  CG2 ILE  168      59.695  23.533   5.163  1.00 17.65
ATOM  101  CG1 ILE  168      59.330  21.794   6.972  1.00 20.27
ATOM  102  CD1 ILE  168      60.048  20.631   6.322  1.00 17.96
ATOM  103  C   ILE  168      57.486  25.002   5.979  1.00 21.96
ATOM  104  O   ILE  168      58.045  26.064   6.291  1.00 23.06
ATOM  105  N   HIS  169      56.591  24.925   4.996  1.00 22.04
ATOM  106  CA  HIS  169      56.285  26.092   4.164  1.00 21.21
ATOM  107  CB  HIS  169      55.413  25.702   2.969  1.00 20.12
ATOM  108  CG  HIS  169      56.101  24.799   2.001  1.00 19.18
ATOM  109  CD2 HIS  169      57.398  24.733   1.619  1.00 18.62
ATOM  110  ND1 HIS  169      55.457  23.764   1.357  1.00 17.90
ATOM  111  CE1 HIS  169      56.327  23.096   0.625  1.00 18.43
ATOM  112  NE2 HIS  169      57.513  23.660   0.772  1.00 20.10
ATOM  113  C   HIS  169      55.615  27.198   4.959  1.00 20.61
ATOM  114  O   HIS  169      55.979  28.370   4.836  1.00 20.08
ATOM  115  N   VAL  170      54.632  26.821   5.769  1.00 20.01
ATOM  116  CA  VAL  170      53.922  27.785   6.580  1.00 20.52
ATOM  117  CB  VAL  170      52.816  27.120   7.384  1.00 21.33
ATOM  118  CG1 VAL  170      52.224  28.113   8.366  1.00 22.32
ATOM  119  CG2 VAL  170      51.740  26.608   6.438  1.00 23.27
ATOM  120  C   VAL  170      54.891  28.477   7.521  1.00 20.58
ATOM  121  O   VAL  170      54.926  29.704   7.554  1.00 22.32
ATOM  122  N   ALA  171      55.712  27.696   8.230  1.00 18.83
ATOM  123  CA  ALA  171      56.692  28.234   9.182  1.00 18.34
ATOM  124  CB  ALA  171      57.375  27.102   9.946  1.00 17.05
ATOM  125  C   ALA  171      57.733  29.151   8.533  1.00 17.84
ATOM  126  O   ALA  171      58.084  30.200   9.091  1.00 18.67
ATOM  127  N   THR  172      58.231  28.756   7.367  1.00 17.81
ATOM  128  CA  THR  172      59.215  29.551   6.639  1.00 18.88
ATOM  129  CB  THR  172      59.726  28.794   5.380  1.00 20.47
ATOM  130  OG1 THR  172      60.280  27.531   5.776  1.00 21.38
ATOM  131  CG2 THR  172      60.806  29.599   4.648  1.00 20.22
ATOM  132  C   THR  172      58.655  30.932   6.251  1.00 19.42
ATOM  133  O   THR  172      59.320  31.957   6.435  1.00 17.98
ATOM  134  N   GLU  173      57.425  30.970   5.756  1.00 19.97
ATOM  135  CA  GLU  173      56.811  32.236   5.374  1.00 22.51
ATOM  136  CB  GLU  173      55.520  31.981   4.577  1.00 27.26
ATOM  137  CG  GLU  173      54.823  33.244   4.005  1.00 34.96
ATOM  138  CD  GLU  173      55.690  34.040   3.020  1.00 39.54
ATOM  139  OE1 GLU  173      56.610  33.454   2.395  1.00 41.82
ATOM  140  OE2 GLU  173      55.443  35.259   2.872  1.00 41.06
ATOM  141  C   GLU  173      56.538  33.099   6.622  1.00 21.60
ATOM  142  O   GLU  173      56.726  34.313   6.595  1.00 21.73
ATOM  143  N   ALA  174      56.123  32.461   7.716  1.00 19.69
ATOM  144  CA  ALA  174      55.844  33.155   8.968  1.00 18.07
ATOM  145  CB  ALA  174      55.423  32.169  10.037  1.00 16.90
```

ATOM 146 C ALA 174 57.101 33.883 9.400 1.00 17.65
ATOM 147 O ALA 174 57.052 35.031 9.829 1.00 19.80
ATOM 148 N HIS 175 58.240 33.222 9.259 1.00 16.39
ATOM 149 CA HIS 175 59.498 33.831 9.629 1.00 16.41
ATOM 150 CB HIS 175 60.574 32.758 9.804 1.00 12.71
ATOM 151 CG HIS 175 61.938 33.318 10.043 1.00 11.09
ATOM 152 CD2 HIS 175 62.373 34.252 10.920 1.00 8.26
ATOM 153 ND1 HIS 175 63.030 32.977 9.273 1.00 13.39
ATOM 154 CE1 HIS 175 64.076 33.683 9.658 1.00 13.77
ATOM 155 NE2 HIS 175 63.702 34.464 10.658 1.00 12.70
ATOM 156 C HIS 175 59.959 34.903 8.624 1.00 19.55
ATOM 157 O HIS 175 60.293 36.027 9.016 1.00 18.38
ATOM 158 N ARG 176 59.987 34.555 7.339 1.00 20.77
ATOM 159 CA ARG 176 60.424 35.494 6.307 1.00 21.30
ATOM 160 CB ARG 176 60.315 34.876 4.917 1.00 24.87
ATOM 161 CG ARG 176 61.361 33.827 4.609 1.00 30.22
ATOM 162 CD ARG 176 61.429 33.603 3.116 1.00 36.29
ATOM 163 NE ARG 176 62.256 32.457 2.758 1.00 44.72
ATOM 164 CZ ARG 176 62.031 31.680 1.700 1.00 49.80
ATOM 165 NH1 ARG 176 61.000 31.935 0.894 1.00 50.83
ATOM 166 NH2 ARG 176 62.812 30.627 1.466 1.00 50.14
ATOM 167 C ARG 176 59.658 36.807 6.337 1.00 20.67
ATOM 168 O ARG 176 60.256 37.877 6.238 1.00 20.53
ATOM 169 N SER 177 58.344 36.730 6.508 1.00 20.67
ATOM 170 CA SER 177 57.526 37.934 6.551 1.00 21.86
ATOM 171 CB SER 177 56.061 37.588 6.298 1.00 19.59
ATOM 172 OG SER 177 55.541 36.774 7.329 1.00 21.85
ATOM 173 C SER 177 57.659 38.733 7.857 1.00 23.27
ATOM 174 O SER 177 57.073 39.807 7.989 1.00 24.40
ATOM 175 N THR 178 58.383 38.202 8.837 1.00 22.16
ATOM 176 CA THR 178 58.542 38.913 10.095 1.00 20.62
ATOM 177 CB THR 178 57.853 38.162 11.265 1.00 19.93
ATOM 178 OG1 THR 178 58.386 36.838 11.381 1.00 18.72
ATOM 179 CG2 THR 178 56.359 38.057 11.033 1.00 16.95
ATOM 180 C THR 178 60.015 39.137 10:394 1.00 21.57
ATOM 181 O THR 178 60.368 39.649 11.449 1.00 23.91
ATOM 182 N ASN 179 60.870 38.769 9.445 1.00 22.22
ATOM 183 CA ASN 179 62.316 38.912 9.585 1.00 24.22
ATOM 184 CB ASN 179 63.013 37.690 8.970 1.00 22.49
ATOM 185 CG ASN 179 64.480 37.596 9.344 1.00 23.53
ATOM 186 OD1 ASN 179 64.866 37.912 10.464 1.00 22.32
ATOM 187 ND2 ASN 179 65.296 37.100 8.425 1.00 23.84
ATOM 188 C ASN 179 62.744 40.210 8.881 1.00 26.52
ATOM 189 O ASN 179 62.923 40.253 7.657 1.00 26.65
ATOM 190 N ALA 180 62.898 41.267 9.671 1.00 27.47
ATOM 191 CA ALA 180 63.255 42.582 9.166 1.00 30.30
ATOM 192 CB ALA 180 63.552 43.508 10.321 1.00 27.21

```
ATOM   193  C   ALA  180      64.404  42.593   8.166  1.00 33.14
ATOM   194  O   ALA  180      65.440  41.972   8.397  1.00 33.71
ATOM   195  N   GLN  181      64.209  43.295   7.049  0.50 35.09      ALTA
ATOM   196  CA  GLN  181      65.212  43.423   5.980  0.50 37.44      ALTA
ATOM   197  CB  GLN  181      66.544  43.974   6.511  0.50 38.60      ALTA
ATOM   198  CG  GLN  181      66.728  45.462   6.299  0.50 40.53      ALTA
ATOM   199  CD  GLN  181      65.805  46.291   7.162  0.50 42.72      ALTA
ATOM   200  OE1 GLN  181      64.639  46.512   6.828  0.50 42.05      ALTA
ATOM   201  NE2 GLN  181      66.324  46.756   8.284  0.50 44.59      ALTA
ATOM   202  C   GLN  181      65.481  42.180   5.138  0.50 38.43      ALTA
ATOM   203  O   GLN  181      66.175  42.262   4.118  0.50 38.92      ALTA
ATOM   204  N   GLY  182      64.958  41.034   5.562  1.00 38.74
ATOM   205  CA  GLY  182      65.166  39.808   4.805  1.00 40.07
ATOM   206  C   GLY  182      66.634  39.554   4.486  1.00 42.06
ATOM   207  O   GLY  182      67.504  39.684   5.346  1.00 43.28
ATOM   208  N   SER  183      66.926  39.272   3.224  1.00 43.72
ATOM   209  CA  SER  183      68.299  39.001   2.812  1.00 45.88
ATOM   210  CB  SER  183      68.304  38.069   1.593  1.00 47.26
ATOM   211  OG  SER  183      67.519  38.605   0.531  1.00 47.23
ATOM   212  C   SER  183      69.095  40.268   2.497  1.00 46.24
ATOM   213  O   SER  183      70.290  40.194   2.185  1.00 48.13
ATOM   214  N   HIS  184      68.445  41.426   2.579  1.00 45.79
ATOM   215  CA  HIS  184      69.111  42.690   2.276  1.00 45.00
ATOM   216  CB  HIS  184      68.127  43.636   1.594  1.00 43.54
ATOM   217  C   HIS  184      69.732  43.351   3.516  1.00 44.67
ATOM   218  O   HIS  184      70.316  44.440   3.428  1.00 45.02
ATOM   219  N   TRP  185      69.659  42.663   4.653  1.00 43.24
ATOM   220  CA  TRP  185      70.190  43.172   5.919  1.00 40.98
ATOM   221  CB  TRP  185      70.078  42.106   7.020  1.00 37.96
ATOM   222  CG  TRP  185      70.889  40.874   6.775  1.00 34.14
ATOM   223  CD2 TRP  185      72.197  40.593   7.291  1.00 33.38
ATOM   224  CE2 TRP  185      72.572  39.321   6.807  1.00 31.68
ATOM   225  CE3 TRP  185      73.092  41.296   8.107  1.00 31.65
ATOM   226  CD1 TRP  185      70.530  39.790   6.028  1.00 34.27
ATOM   227  NE1 TRP  185      71.536  38.852   6.043  1.00 33.51
ATOM   228  CZ2 TRP  185      73.795  38.733   7.121  1.00 31.67
ATOM   229  CZ3 TRP  185      74.308  40.713   8.419  1.00 31.29
ATOM   230  CH2 TRP  185      74.651  39.444   7.923  1.00 31.06
ATOM   231  C   TRP  185      71.618  43.720   5.856  1.00 41.52
ATOM   232  O   TRP  185      71.893  44.817   6.335  1.00 40.52
ATOM   233  N   LYS  186      72.520  42.976   5.234  1.00 42.94
ATOM   234  CA  LYS  186      73.896  43.417   5.143  1.00 45.25
ATOM   235  CB  LYS  186      74.764  42.328   4.508  1.00 45.96
ATOM   236  CG  LYS  186      76.255  42.600   4.590  1.00 48.07
ATOM   237  CD  LYS  186      77.053  41.307   4.504  1.00 51.20
ATOM   238  CE  LYS  186      78.554  41.574   4.457  1.00 52.69
ATOM   239  NZ  LYS  186      78.975  42.277   3.201  1.00 55.56
```

```
ATOM   240  C   LYS   186     74.025  44.730   4.377  1.00 47.38
ATOM   241  O   LYS   186     74.914  45.535   4.663  1.00 47.65
ATOM   242  N   GLN   187     73.134  44.959   3.418  0.50 48.02    ALTA
ATOM   243  CA  GLN   187     73.193  46.183   2.623  0.50 48.69    ALTA
ATOM   244  CB  GLN   187     72.547  45.973   1.246  0.50 48.66    ALTA
ATOM   245  CG  GLN   187     73.104  44.771   0.453  0.50 49.05    ALTA
ATOM   246  CD  GLN   187     74.624  44.766   0.339  0.50 49.17    ALTA
ATOM   247  OE1 GLN   187     75.225  45.691  -0.209  0.50 49.71    ALTA
ATOM   248  NE2 GLN   187     75.250  43.710   0.847  0.50 48.57    ALTA
ATOM   249  C   GLN   187     72.551  47.373   3.343  0.50 49.06    ALTA
ATOM   250  O   GLN   187     73.094  48.475   3.329  0.50 49.53    ALTA
ATOM   251  N   ARG   188     71.405  47.152   3.980  1.00 49.18
ATOM   252  CA  ARG   188     70.723  48.221   4.695  1.00 49.90
ATOM   253  CB  ARG   188     69.209  47.988   4.653  1.00 53.68
ATOM   254  CG  ARG   188     68.617  47.798   3.251  1.00 57.22
ATOM   255  CD  ARG   188     67.099  47.962   3.302  1.00 60.67
ATOM   256  NE  ARG   188     66.430  47.441   2.110  1.00 64.43
ATOM   257  CZ  ARG   188     65.931  46.208   2.009  1.00 66.13
ATOM   258  NH1 ARG   188     66.027  45.362   3.031  1.00 66.69
ATOM   259  NH2 ARG   188     65.318  45.823   0.893  1.00 66.10
ATOM   260  C   ARG   188     71.150  48.510   6.133  1.00 48.42
ATOM   261  O   ARG   188     70.544  49.368   6.784  1.00 48.86
ATOM   262  N   ARG   189     72.153  47.804   6.647  1.00 46.00
ATOM   263  CA  ARG   189     72.581  48.030   8.028  1.00 44.24
ATOM   264  CB  ARG   189     73.039  46.726   8.690  1.00 43.40
ATOM   265  CG  ARG   189     74.367  46.204   8.203  1.00 43.05
ATOM   266  CD  ARG   189     74.808  45.021   9.019  1.00 43.62
ATOM   267  NE  ARG   189     76.185  44.660   8.717  1.00 45.95
ATOM   268  CZ  ARG   189     76.981  43.976   9.536  1.00 48.56
ATOM   269  NH1 ARG   189     76.548  43.560  10.724  1.00 46.34
ATOM   270  NH2 ARG   189     78.233  43.735   9.174  1.00 50.12
ATOM   271  C   ARG   189     73.642  49.116   8.238  1.00 43.20
ATOM   272  O   ARG   189     74.629  49.210   7.500  1.00 43.07
ATOM   273  N   LYS   190     73.427  49.925   9.268  1.00 41.56
ATOM   274  CA  LYS   190     74.335  51.003   9.628  1.00 39.96
ATOM   275  CB  LYS   190     73.563  52.323   9.757  1.00 38.85
ATOM   276  C   LYS   190     74.983  50.631  10.956  1.00 38.91
ATOM   277  O   LYS   190     74.345  50.015  11.806  1.00 38.17
ATOM   278  N   PHE   191     76.261  50.959  11.104  1.00 38.49
ATOM   279  CA  PHE   191     76.998  50.673  12.326  1.00 38.42
ATOM   280  CB  PHE   191     78.500  50.762  12.073  1.00 38.37
ATOM   281  CG  PHE   191     79.056  49.608  11.308  1.00 39.05
ATOM   282  CD1 PHE   191     78.712  49.408   9.976  1.00 40.02
ATOM   283  CD2 PHE   191     79.942  48.727  11.917  1.00 39.19
ATOM   284  CE1 PHE   191     79.245  48.344   9.256  1.00 40.57
ATOM   285  CE2 PHE   191     80.482  47.661  11.213  1.00 40.32
ATOM   286  CZ  PHE   191     80.133  47.466   9.875  1.00 41.84
```

ATOM 287 C PHE 191 76.650 51.673 13.416 1.00 37.96
ATOM 288 O PHE 191 76.568 52.872 13.151 1.00 38.95
ATOM 289 N LEU 192 76.433 51.184 14.634 1.00 37.05
ATOM 290 CA LEU 192 76.138 52.063 15.759 1.00 35.99
ATOM 291 CB LEU 192 75.833 51.247 17.014 1.00 33.04
ATOM 292 CG LEU 192 75.503 52.074 18.260 1.00 31.38
ATOM 293 CD1 LEU 192 74.116 52.651 18.102 1.00 29.02
ATOM 294 CD2 LEU 192 75.592 51.229 19.536 1.00 30.32
ATOM 295 C LEU 192 77.436 52.831 15.976 1.00 36.99
ATOM 296 O LEU 192 78.500 52.218 16.112 1.00 37.66
ATOM 297 N PRO 193 77.377 54.177 15.988 1.00 38.15
ATOM 298 CD PRO 193 76.156 54.996 15.902 1.00 37.90
ATOM 299 CA PRO 193 78.561 55.025 16.187 1.00 38.68
ATOM 300 CB PRO 193 77.950 56.365 16.568 1.00 37.20
ATOM 301 CG PRO 193 76.711 56.397 15.758 1.00 37.08
ATOM 302 C PRO 193 79.475 54.503 17.294 1.00 41.12
ATOM 303 O PRO 193 79.005 54.129 18.367 1.00 42.26
ATOM 304 N ASP 194 80.782 54.509 17.052 1.00 43.62
ATOM 305 CA ASP 194 81.731 54.012 18.050 1.00 46.71
ATOM 306 CB ASP 194 83.131 53.938 17.470 1.00 49.32
ATOM 307 CG ASP 194 83.237 52.904 16.397 1.00 52.34
ATOM 308 OD1 ASP 194 83.539 51.726 16.719 1.00 53.18
ATOM 309 OD2 ASP 194 82.981 53.268 15.227 1.00 55.10
ATOM 310 C ASP 194 81.769 54.743 19.386 1.00 47.12
ATOM 311 O ASP 194 82.158 54.163 20.403 1.00 48.16
ATOM 312 N ASP 195 81.389 56.015 19.386 1.00 47.54
ATOM 313 CA ASP 195 81.382 56.791 20.620 1.00 48.68
ATOM 314 CB ASP 195 81.180 58.285 20.322 1.00 50.76
ATOM 315 CG ASP 195 79.871 58.572 19.602 1.00 54.24
ATOM 316 OD1 ASP 195 78.929 59.082 20.253 1.00 56.17
ATOM 317 OD2 ASP 195 79.786 58.292 18.385 1.00 56.08
ATOM 318 C ASP 195 80.304 56.274 21.580 1.00 47.63
ATOM 319 O ASP 195 80.294 56.621 22.772 1.00 49.07
ATOM 320 N ILE 196 79.400 55.444 21.065 1.00 44.87
ATOM 321 CA ILE 196 78.330 54.890 21:888 1.00 42.53
ATOM 322 CB ILE 196 76.983 54.813 21.121 1.00 42.19
ATOM 323 CG2 ILE 196 75.870 54.357 22.060 1.00 40.29
ATOM 324 CG1 ILE 196 76.635 56.191 20.535 1.00 41.32
ATOM 325 CD1 ILE 196 75.344 56.219 19.732 1.00 41.32
ATOM 326 C ILE 196 78.725 53.509 22.391 1.00 40.89
ATOM 327 O ILE 196 79.358 52.722 21.679 1.00 40.08
ATOM 328 N GLY 197 78.384 53.240 23.642 1.00 40.16
ATOM 329 CA GLY 197 78.705 51.957 24.228 1.00 40.21
ATOM 330 C GLY 197 80.066 51.907 24.879 1.00 40.18
ATOM 331 O GLY 197 80.512 50.839 25.267 1.00 40.55
ATOM 332 N GLN 198 80.718 53.057 25.029 1.00 41.25
ATOM 333 CA GLN 198 82.038 53.111 25.664 1.00 40.94

ATOM 334 CB GLN 198 83.041 53.823 24.738 1.00 39.51
ATOM 335 C GLN 198 81.995 53.796 27.046 1.00 40.93
ATOM 336 O GLN 198 83.036 54.197 27.571 1.00 41.83
ATOM 337 N SER 199 80.806 53.859 27.654 1.00 39.68
ATOM 338 CA SER 199 80.615 54.510 28.961 1.00 37.74
ATOM 339 CB SER 199 79.995 55.905 28.768 1.00 38.50
ATOM 340 OG SER 199 80.687 56.672 27.792 1.00 40.71
ATOM 341 C SER 199 79.743 53.726 29.958 1.00 36.31
ATOM 342 O SER 199 78.719 54.228 30.436 1.00 35.69
ATOM 343 N PRO 200 80.123 52.484 30.280 1.00 35.05
ATOM 344 CD PRO 200 81.246 51.684 29.760 1.00 33.97
ATOM 345 CA PRO 200 79.313 51.715 31.228 1.00 35.89
ATOM 346 CB PRO 200 79.872 50.304 31.075 1.00 33.94
ATOM 347 CG PRO 200 81.297 50.532 30.708 1.00 33.31
ATOM 348 C PRO 200 79.477 52.241 32.656 1.00 37.75
ATOM 349 O PRO 200 80.484 51.959 33.299 1.00 38.78
ATOM 350 N ILE 201 78.493 52.988 33.158 1.00 39.61
ATOM 351 CA ILE 201 78.590 53.551 34.511 1.00 40.56
ATOM 352 CB ILE 201 78.715 55.093 34.484 1.00 40.20
ATOM 353 CG2 ILE 201 80.125 55.501 34.082 1.00 41.06
ATOM 354 CG1 ILE 201 77.690 55.694 33.532 1.00 40.98
ATOM 355 CD1 ILE 201 77.969 57.147 33.205 1.00 44.31
ATOM 356 C ILE 201 77.535 53.160 35.546 1.00 41.40
ATOM 357 O ILE 201 77.768 53.313 36.751 1.00 42.09
ATOM 358 N VAL 202 76.365 52.701 35.104 1.00 41.42
ATOM 359 CA VAL 202 75.325 52.293 36.053 1.00 40.70
ATOM 360 CB VAL 202 73.913 52.292 35.422 1.00 38.44
ATOM 361 CG1 VAL 202 72.881 51.826 36.435 1.00 35.91
ATOM 362 CG2 VAL 202 73.560 53.692 34.934 1.00 36.42
ATOM 363 C VAL 202 75.687 50.917 36.622 1.00 41.64
ATOM 364 O VAL 202 76.094 50.008 35.894 1.00 42.05
ATOM 365 N SER 203 75.596 50.800 37.938 1.00 43.06
ATOM 366 CA SER 203 75.947 49.576 38.639 1.00 44.57
ATOM 367 CB SER 203 75.916 49.842 40.154 1.00 46.82
ATOM 368 OG SER 203 76.457 48.772 40.916 1.00 50.18
ATOM 369 C SER 203 75.052 48.388 38.294 1.00 44.08
ATOM 370 O SER 203 73.849 48.534 38.093 1.00 44.28
ATOM 371 N MET 204 75.656 47.210 38.231 1.00 43.11
ATOM 372 CA MET 204 74.930 45.980 37.963 1.00 43.12
ATOM 373 CB MET 204 75.048 45.557 36.494 1.00 41.07
ATOM 374 CG MET 204 74.126 46.320 35.554 1.00 36.96
ATOM 375 SD MET 204 72.375 46.134 35.990 1.00 38.66
ATOM 376 CE MET 204 71.970 44.592 35.098 1.00 37.26
ATOM 377 C MET 204 75.561 44.943 38.866 1.00 43.68
ATOM 378 O MET 204 76.784 44.817 38.912 1.00 44.32
ATOM 379 N PRO 205 74.735 44.204 39.619 1.00 44.22
ATOM 380 CD PRO 205 73.261 44.310 39.610 1.00 44.44

```
ATOM    381  CA  PRO   205      75.187  43.164  40.546  1.00 44.32
ATOM    382  CB  PRO   205      73.944  42.299  40.701  1.00 45.18
ATOM    383  CG  PRO   205      72.832  43.335  40.691  1.00 44.29
ATOM    384  C   PRO   205      76.417  42.354  40.122  1.00 44.31
ATOM    385  O   PRO   205      77.393  42.293  40.864  1.00 43.97
ATOM    386  N   ASP   206      76.404  41.802  38.912  1.00 44.30
ATOM    387  CA  ASP   206      77.524  40.984  38.433  1.00 44.77
ATOM    388  CB  ASP   206      77.073  40.106  37.270  1.00 47.12
ATOM    389  CG  ASP   206      76.503  40.912  36.120  1.00 49.73
ATOM    390  OD1 ASP   206      76.992  42.039  35.863  1.00 49.65
ATOM    391  OD2 ASP   206      75.553  40.416  35.478  1.00 51.96
ATOM    392  C   ASP   206      78.805  41.718  38.037  1.00 44.10
ATOM    393  O   ASP   206      79.754  41.099  37.549  1.00 43.60
ATOM    394  N   GLY   207      78.804  43.039  38.145  1.00 44.19
ATOM    395  CA  GLY   207      80.001  43.785  37.803  1.00 43.51
ATOM    396  C   GLY   207      80.041  44.425  36.433  1.00 43.29
ATOM    397  O   GLY   207      80.745  45.421  36.257  1.00 44.47
ATOM    398  N   ASP   208      79.363  43.845  35.446  1.00 42.45
ATOM    399  CA  ASP   208      79.347  44.436  34.106  1.00 41.51
ATOM    400  CB  ASP   208      78.915  43.402  33.070  1.00 42.91
ATOM    401  CG  ASP   208      80.001  42.379  32.785  1.00 43.57
ATOM    402  OD1 ASP   208      79.675  41.218  32.468  1.00 44.55
ATOM    403  OD2 ASP   208      81.191  42.742  32.868  1.00 47.14
ATOM    404  C   ASP   208      78.378  45.606  34.143  1.00 40.78
ATOM    405  O   ASP   208      77.176  45.403  34.277  1.00 42.50
ATOM    406  N   LYS   209      78.902  46.827  34.058  1.00 39.10
ATOM    407  CA  LYS   209      78.071  48.033  34.150  1.00 37.23
ATOM    408  CB  LYS   209      78.910  49.211  34.681  1.00 37.29
ATOM    409  C   LYS   209      77.326  48.423  32.871  1.00 34.47
ATOM    410  O   LYS   209      77.707  48.013  31.776  1.00 33.85
ATOM    411  N   VAL   210      76.275  49.228  33.028  1.00 33.30
ATOM    412  CA  VAL   210      75.448  49.684  31.907  1.00 31.78
ATOM    413  CB  VAL   210      73.929  49.618  32.235  1.00 29.51
ATOM    414  CG1 VAL   210      73.102  50.012  31.010  1.00 29.24
ATOM    415  CG2 VAL   210      73.541  48.237  32.698  1.00 29.84
ATOM    416  C   VAL   210      75.731  51.115  31.451  1.00 32.68
ATOM    417  O   VAL   210      75.845  52.033  32.264  1.00 32.69
ATOM    418  N   ASP   211      75.769  51.290  30.134  1.00 33.00
ATOM    419  CA  ASP   211      75.978  52.574  29.476  1.00 31.85
ATOM    420  CB  ASP   211      76.826  52.353  28.221  1.00 32.38
ATOM    421  CG  ASP   211      77.019  53.612  27.386  1.00 31.88
ATOM    422  OD1 ASP   211      78.123  53.768  26.843  1.00 32.78
ATOM    423  OD2 ASP   211      76.079  54.412  27.208  1.00 32.32
ATOM    424  C   ASP   211      74.562  53.023  29.101  1.00 33.39
ATOM    425  O   ASP   211      73.925  52.444  28.206  1.00 31.94
ATOM    426  N   LEU   212      74.078  54.063  29.770  1.00 32.50
ATOM    427  CA  LEU   212      72.731  54.568  29.532  1.00 32.29
```

ATOM 428 CB LEU 212 72.440 55.736 30.470 1.00 32.41
ATOM 429 CG LEU 212 72.311 55.336 31.936 1.00 32.11
ATOM 430 CD1 LEU 212 72.447 56.555 32.830 1.00 32.35
ATOM 431 CD2 LEU 212 70.979 54.650 32.148 1.00 30.87
ATOM 432 C LEU 212 72.419 54.962 28.092 1.00 32.29
ATOM 433 O- LEU 212 71.326 54.695 27.609 1.00 32.13
ATOM 434 N GLU 213 73.370 55.589 27.407 1.00 32.21
ATOM 435 CA GLU 213 73.144 56.007 26.028 1.00 33.12
ATOM 436 CB GLU 213 74.305 56.864 25.530 1.00 36.72
ATOM 437 CG GLU 213 74.067 57.468 24.146 1.00 40.61
ATOM 438 CD GLU 213 75.316 58.101 23.545 1.00 44.21
ATOM 439 OE1 GLU 213 76.434 57.851 24.059 1.00 46.23
ATOM 440 OE2 GLU 213 75.178 58.836 22.543 1.00 45.81
ATOM 441 C GLU 213 72.966 54.801 25.111 1.00 31.91
ATOM 442 O GLU 213 72.064 54.775 24.273 1.00 31.31
ATOM 443 N ALA 214 73.827 53.803 25.285 1.00 30.66
ATOM 444 CA ALA 214 73.769 52.585 24.482 1.00 30.43
ATOM 445 CB ALA 214 74.971 51.690 24.783 1.00 29.77
ATOM 446 C ALA 214 72.464 51.854 24.778 1.00 29.34
ATOM 447 O ALA 214 71.772 51.421 23.862 1.00 28.33
ATOM 448 N PHE 215 72.116 51.762 26.058 1.00 28.45
ATOM 449 CA PHE 215 70.882 51.116 26.492 1.00 29.05
ATOM 450 CB PHE 215 70.732 51.240 28.005 1.00 25.98
ATOM 451 CG PHE 215 69.443 50.689 28.535 1.00 25.53
ATOM 452 CD1 PHE 215 69.330 49.344 28.854 1.00 26.16
ATOM 453 CD2 PHE 215 68.349 51.519 28.737 1.00 25.04
ATOM 454 CE1 PHE 215 68.144 48.831 29.370 1.00 25.73
ATOM 455 CE2 PHE 215 67.160 51.018 29.252 1.00 25.84
ATOM 456 CZ PHE 215 67.058 49.669 29.570 1.00 25.25
ATOM 457 C PHE 215 69.694 51.780 25.801 1.00 30.92
ATOM 458 O PHE 215 68.773 51.107 25.316 1.00 30.38
ATOM 459 N SER 216 69.714 53.108 25.776 1.00 31.41
ATOM 460 CA SER 216 68.667 53.887 25.136 1.00 31.23
ATOM 461 CB SER 216 68.976 55.375 25.256 1.00 32.50
ATOM 462 OG SER 216 67.972 56.153 24.628 1.00 35.83
ATOM 463 C SER 216 68.600 53.504 23.663 1.00 31.67
ATOM 464 O SER 216 67.527 53.235 23.129 1.00 31.34
ATOM 465 N GLU 217 69.756 53.475 23.014 1.00 31.72
ATOM 466 CA GLU 217 69.823 53.121 21.609 1.00 33.06
ATOM 467 CB GLU 217 71.269 53.153 21.110 1.00 34.93
ATOM 468 CG GLU 217 71.824 54.557 20.921 1.00 38.98
ATOM 469 CD GLU 217 70.986 55.399 19.963 1.00 41.92
ATOM 470 OE1 GLU 217 70.177 56.221 20.444 1.00 44.02
ATOM 471 OE2 GLU 217 71.139 55.246 18.731 1.00 44.46
ATOM 472 C GLU 217 69.199 51.759 21.330 1.00 31.78
ATOM 473 O GLU 217 68.447 51.607 20.369 1.00 32.51
ATOM 474 N PHE 218 69.477 50.779 22.181 1.00 29.80

ATOM 475 CA PHE 218 68.924 49.447 21.979 1.00 27.65
ATOM 476 CB PHE 218 69.668 48.416 22.827 1.00 26.79
ATOM 477 CG PHE 218 71.114 48.292 22.467 1.00 24.76
ATOM 478 CD1 PHE 218 72.083 48.191 23.446 1.00 24.37
ATOM 479 CD2 PHE 218 71.510 48.354 21.134 1.00 24.30
ATOM 480 CE1 PHE 218 73.424 48.167 23.106 1.00 23.85
ATOM 481 CE2 PHE 218 72.843 48.329 20.785 1.00 23.07
ATOM 482 CZ PHE 218 73.804 48.236 21.772 1.00 24.45
ATOM 483 C PHE 218 67.441 49.403 22.255 1.00 26.94
ATOM 484 O PHE 218 66.658 48.985 21.409 1.00 27.98
ATOM 485 N THR 219 67.032 49.906 23.405 1.00 26.97
ATOM 486 CA THR 219 65.619 49.876 23.740 1.00 27.25
ATOM 487 CB THR 219 65.379 50.304 25.195 1.00 27.35
ATOM 488 OG1 THR 219 65.924 51.612 25.410 1.00 26.48
ATOM 489 CG2 THR 219 66.034 49.303 26.139 1.00 24.51
ATOM 490 C THR 219 64.747 50.689 22.782 1.00 27.21
ATOM 491 O THR 219 63.588 50.348 22.557 1.00 28.58
ATOM 492 N LYS 220 65.318 51.726 22.184 1.00 26.75
ATOM 493 CA LYS 220 64.576 52.569 21.254 1.00 27.81
ATOM 494 CB LYS 220 65.439 53.753 20.782 1.00 27.46
ATOM 495 C LYS 220 64.058 51.772 20.056 1.00 28.62
ATOM 496 O LYS 220 63.014 52.101 19.500 1.00 28.63
ATOM 497 N ILE 221 64.774 50.721 19.662 1.00 28.92
ATOM 498 CA ILE 221 64.331 49.907 18.527 1.00 28.19
ATOM 499 CB ILE 221 65.450 49.732 17.465 1.00 27.17
ATOM 500 CG2 ILE 221 65.866 51.095 16.911 1.00 26.61
ATOM 501 CG1 ILE 221 66.645 48.977 18.061 1.00 26.80
ATOM 502 CD1 ILE 221 67.621 48.417 17.029 1.00 24.91
ATOM 503 C ILE 221 63.840 48.512 18.937 1.00 28.82
ATOM 504 O ILE 221 63.552 47.678 18.076 1.00 28.59
ATOM 505 N ILE 222 63.690 48.263 20.236 1.00 27.09
ATOM 506 CA ILE 222 63.279 46.934 20.665 1.00 27.22
ATOM 507 CB ILE 222 63.777 46.591 22.101 1.00 26.58
ATOM 508 CG2 ILE 222 62.815 47.151 23.171 1.00 23.83
ATOM 509 CG1 ILE 222 63.949 45.065 22.230 1.00 24.15
ATOM 510 CD1 ILE 222 64.727 44.610 23.458 1.00 21.43
ATOM 511 C ILE 222 61.797 46.614 20.519 1.00 28.33
ATOM 512 O ILE 222 61.445 45.459 20.260 1.00 29.81
ATOM 513 N THR 223 60.929 47.618 20.622 1.00 27.63
ATOM 514 CA THR 223 59.494 47.366 20.505 1.00 26.83
ATOM 515 CB THR 223 58.667 48.631 20.797 1.00 29.85
ATOM 516 OG1 THR 223 58.839 48.983 22.180 1.00 30.67
ATOM 517 CG2 THR 223 57.183 48.390 20.525 1.00 26.50
ATOM 518 C THR 223 59.103 46.698 19.183 1.00 25.28
ATOM 519 O THR 223 58.390 45.691 19.196 1.00 24.87
ATOM 520 N PRO 224 59.535 47.256 18.031 1.00 23.96
ATOM 521 CD PRO 224 60.138 48.580 17.792 1.00 22.28

ATOM 522 CA PRO 224 59.181 46.612 16.759 1.00 23.13
ATOM 523 CB PRO 224 59.747 47.570 15.699 1.00 22.96
ATOM 524 CG PRO 224 60.762 48.406 16.443 1.00 24.53
ATOM 525 C PRO 224 59.790 45.204 16.634 1.00 22.56
ATOM 526 O PRO 224 59.198 44.332 15.994 1.00 22.77
ATOM 527 N ALA 225 60.960 44.989 17.240 1.00 19.17
ATOM 528 CA ALA 225 61.622 43.684 17.213 1.00 18.54
ATOM 529 CB ALA 225 63.009 43.773 17.806 1.00 16.79
ATOM 530 C ALA 225 60.802 42.643 17.969 1.00 19.08
ATOM 531 O ALA 225 60.681 41.502 17.523 1.00 21.30
ATOM 532 N ILE 226 60.253 43.033 19.117 1.00 18.30
ATOM 533 CA ILE 226 59.420 42.147 19.929 1.00 18.65
ATOM 534 CB ILE 226 59.092 42.779 21.288 1.00 17.30
ATOM 535 CG2 ILE 226 58.057 41.952 22.020 1.00 17.76
ATOM 536 CG1 ILE 226 60.361 42.915 22.123 1.00 17.07
ATOM 537 CD1 ILE 226 60.175 43.775 23.351 1.00 14.65
ATOM 538 C ILE 226 58.109 41.858 19.199 1.00 19.56
ATOM 539 O ILE 226 57.638 40.719 19.163 1.00 19.51
ATOM 540 N THR 227 57.521 42.903 18.627 1.00 20.26
ATOM 541 CA THR 227 56.278 42.782 17.881 1.00 21.19
ATOM 542 CB THR 227 55.856 44.150 17.326 1.00 22.41
ATOM 543 OG1 THR 227 55.670 45.053 18.420 1.00 25.09
ATOM 544 CG2 THR 227 54.558 44.041 16.560 1.00 24.29
ATOM 545 C THR 227 56.411 41.758 16.742 1.00 20.16
ATOM 546 O THR 227 55.487 40.978 16.496 1.00 21.18
ATOM 547 N ARG 228 57.558 41.744 16.069 1.00 18.42
ATOM 548 CA ARG 228 57.783 40.786 14.991 1.00 18.29
ATOM 549 CB ARG 228 59.032 41.136 14.191 1.00 19.95
ATOM 550 CG ARG 228 58.810 42.349 13.286 1.00 23.31
ATOM 551 CD ARG 228 60.001 42.646 12.405 1.00 25.64
ATOM 552 NE ARG 228 61.139 43.138 13.171 1.00 27.01
ATOM 553 CZ ARG 228 62.209 42.413 13.468 1.00 28.20
ATOM 554 NH1 ARG 228 62.280 41.155 13.067 1.00 28.99
ATOM 555 NH2 ARG 228 63.219 42.951 14.141 1.00 27.25
ATOM 556 C ARG 228 57.834 39.352 15.502 1.00 18.40
ATOM 557 O ARG 228 57.433 38.431 14.788 1.00 17.50
ATOM 558 N VAL 229 58.278 39.162 16.747 1.00 17.42
ATOM 559 CA VAL 229 58.316 37.822 17.334 1.00 16.40
ATOM 560 CB VAL 229 59.116 37.779 18.674 1.00 15.88
ATOM 561 CG1 VAL 229 58.955 36.422 19.334 1.00 16.19
ATOM 562 CG2 VAL 229 60.591 38.010 18.421 1.00 14.44
ATOM 563 C VAL 229 56.852 37.408 17.552 1.00 16.75
ATOM 564 O VAL 229 56.456 36.282 17.219 1.00 16.06
ATOM 565 N VAL 230 56.039 38.343 18.046 1.00 16.09
ATOM 566 CA VAL 230 54.612 38.097 18.266 1.00 16.97
ATOM 567 CB VAL 230 53.896 39.327 18.897 1.00 18.60
ATOM 568 CG1 VAL 230 52.401 39.084 18.972 1.00 17.19

ATOM 569 CG2 VAL 230 54.445 39.629 20.299 1.00 17.82
ATOM 570 C VAL 230 53.938 37.780 16.916 1.00 18.46
ATOM 571 O VAL 230 53.115 36.863 16.828 1.00 18.46
ATOM 572 N ASP 231 54.289 38.539 15.874 1.00 19.21
ATOM 573 CA ASP 231 53.730 38.339 14.531 1.00 19.93
ATOM 574 CB ASP 231 54.231 39.415 13.555 1.00 20.98
ATOM 575 CG ASP 231 53.754 40.817 13.915 1.00 24.11
ATOM 576 OD1 ASP 231 52.704 40.953 14.586 1.00 24.23
ATOM 577 OD2 ASP 231 54.443 41.784 13.522 1.00 25.90
ATOM 578 C ASP 231 54.097 36.962 13.982 1.00 19.27
ATOM 579 O ASP 231 53.266 36.279 13.380 1.00 17.80
ATOM 580 N PHE 232 55.357 36.582 14.163 1.00 18.91
ATOM 581 CA PHE 232 55.841 35.288 13.712 1.00 19.65
ATOM 582 CB PHE 232 57.308 35.078 14.104 1.00 18.14
ATOM 583 CG PHE 232 57.752 33.639 14.027 1.00 19.70
ATOM 584 CD1 PHE 232 57.895 33.005 12.799 1.00 19.18
ATOM 585 CD2 PHE 232 57.987 32.904 15.188 1.00 17.61
ATOM 586 CE1 PHE 232 58.259 31.660 12.723 1.00 19.86
ATOM 587 CE2 PHE 232 58.350 31.560 15.126 1.00 18.98
ATOM 588 CZ PHE 232 58.487 30.935 13.892 1.00 19.46
ATOM 589 C PHE 232 54.996 34.179 14.320 1.00 21.02
ATOM 590 O PHE 232 54.458 33.339 13.598 1.00 20.88
ATOM 591 N ALA 233 54.863 34.202 15.645 1.00 21.64
ATOM 592 CA ALA 233 54.106 33.187 16.378 1.00 21.43
ATOM 593 CB ALA 233 54.223 33.443 17.868 1.00 18.72
ATOM 594 C ALA 233 52.643 33.134 15.955 1.00 23.15
ATOM 595 O ALA 233 52.043 32.062 15.857 1.00 21.76
ATOM 596 N LYS 234 52.083 34.307 15.689 1.00 25.54
ATOM 597 CA LYS 234 50.695 34.446 15.273 1.00 27.57
ATOM 598 CB LYS 234 50.360 35.935 15.146 1.00 30.65
ATOM 599 CG LYS 234 49.110 36.349 15.867 1.00 36.27
ATOM 600 CD LYS 234 49.192 35.988 17.334 1.00 41.19
ATOM 601 CE LYS 234 47.800 35.677 17.890 1.00 43.69
ATOM 602 NZ LYS 234 47.119 34.565 17.147 1.00 44.98
ATOM 603 C LYS 234 50.443 33.739 13.933 1.00 27.70
ATOM 604 O LYS 234 49.355 33.200 13.693 1.00 28.42
ATOM 605 N LYS 235 51.458 33.732 13.074 1.00 26.06
ATOM 606 CA LYS 235 51.364 33.113 11.758 1.00 26.47
ATOM 607 CB LYS 235 52.350 33.791 10.819 1.00 25.23
ATOM 608 CG LYS 235 52.051 35.269 10.644 1.00 26.92
ATOM 609 CD LYS 235 53.017 35.959 9.697 1.00 28.41
ATOM 610 CE LYS 235 52.500 37.350 9.318 1.00 29.31
ATOM 611 NZ LYS 235 53.400 38.026 8.347 1.00 30.37
ATOM 612 C LYS 235 51.540 31.588 11.722 1.00 27.93
ATOM 613 O LYS 235 51.540 30.984 10.649 1.00 29.04
ATOM 614 N LEU 236 51.718 30.973 12.887 1.00 28.83
ATOM 615 CA LEU 236 51.866 29.524 12.986 1.00 29.05

```
ATOM   616  CB  LEU   236      52.928  29.150  14.026  1.00 27.43
ATOM   617  CG  LEU   236      54.352  29.660  13.774  1.00 25.84
ATOM   618  CD1 LEU   236      55.311  29.118  14.847  1.00 23.99
ATOM   619  CD2 LEU   236      54.801  29.236  12.389  1.00 23.86
ATOM   620  C   LEU   236      50.513  28.948  13.392  1.00 31.19
ATOM   621  O   LEU   236      49.870  29.435  14.328  1.00 31.48
ATOM   622  N   PRO   237      50.078  27.875  12.717  1.00 34.60
ATOM   623  CD  PRO   237      50.829  27.156  11.668  1.00 35.04
ATOM   624  CA  PRO   237      48.789  27.223  13.002  1.00 36.52
ATOM   625  CB  PRO   237      48.751  26.081  11.981  1.00 37.48
ATOM   626  CG  PRO   237      50.229  25.776  11.718  1.00 36.60
ATOM   627  C   PRO   237      48.582  26.720  14.447  1.00 37.82
ATOM   628  O   PRO   237      47.629  27.102  15.125  1.00 37.08
ATOM   629  N   MET   238      49.495  25.893  14.935  1.00 40.42
ATOM   630  CA  MET   238      49.366  25.350  16.285  1.00 43.00
ATOM   631  CB  MET   238      50.453  24.298  16.549  1.00 45.20
ATOM   632  CG  MET   238      50.043  22.837  16.296  1.00 47.16
ATOM   633  SD  MET   238      50.598  22.117  14.725  1.00 52.25
ATOM   634  CE  MET   238      52.305  21.809  15.033  1.00 47.29
ATOM   635  C   MET   238      49.389  26.389  17.414  1.00 43.25
ATOM   636  O   MET   238      49.061  26.056  18.558  1.00 44.74
ATOM   637  N   PHE   239      49.720  27.642  17.088  1.00 41.55
ATOM   638  CA  PHE   239      49.825  28.716  18.091  1.00 37.31
ATOM   639  CB  PHE   239      51.031  29.615  17.765  1.00 32.40
ATOM   640  CG  PHE   239      51.293  30.673  18.795  1.00 27.12
ATOM   641  CD1 PHE   239      52.099  30.398  19.893  1.00 24.57
ATOM   642  CD2 PHE   239      50.705  31.933  18.686  1.00 24.70
ATOM   643  CE1 PHE   239      52.319  31.356  20.876  1.00 25.09
ATOM   644  CE2 PHE   239      50.915  32.901  19.659  1.00 25.90
ATOM   645  CZ  PHE   239      51.726  32.612  20.761  1.00 24.52
ATOM   646  C   PHE   239      48.574  29.582  18.352  1.00 36.84
ATOM   647  O   PHE   239      48.136  29.728  19.497  1.00 34.67
ATOM   648  N   SER   240      48.027  30.180  17.299  1.00 36.92
ATOM   649  CA  SER   240      46.857  31.038  17.433  1.00 37.16
ATOM   650  CB  SER   240      46.534  31.706  16:094  1.00 38.34
ATOM   651  C   SER   240      45.627  30.304  17.981  1.00 37.30
ATOM   652  O   SER   240      44.680  30.941  18.433  1.00 36.95
ATOM   653  N   GLU   241      45.639  28.974  17.917  1.00 37.73
ATOM   654  CA  GLU   241      44.531  28.155  18.418  1.00 38.44
ATOM   655  CB  GLU   241      44.644  26.705  17.912  1.00 42.18
ATOM   656  CG  GLU   241      44.290  26.471  16.436  1.00 48.01
ATOM   657  CD  GLU   241      44.559  25.028  15.973  1.00 50.12
ATOM   658  OE1 GLU   241      44.375  24.088  16.779  1.00 51.14
ATOM   659  OE2 GLU   241      44.957  24.838  14.799  1.00 50.68
ATOM   660  C   GLU   241      44.571  28.122  19.937  1.00 35.85
ATOM   661  O   GLU   241      43.561  27.868  20.598  1.00 36.01
ATOM   662  N   LEU   242      45.762  28.329  20.480  1.00 33.28
```

ATOM 663 CA LEU 242 45.959 28.296 21.920 1.00 31.31
ATOM 664 CB LEU 242 47.452 28.382 22.244 1.00 29.28
ATOM 665 CG LEU 242 48.318 27.202 21.797 1.00 29.95
ATOM 666 CD1 LEU 242 49.771 27.538 22.025 1.00 29.19
ATOM 667 CD2 LEU 242 47.935 25.931 22.564 1.00 29.57
ATOM 668 C LEU 242 45.223 29.390 22.676 1.00 30.10
ATOM 669 O LEU 242 44.874 30.434 22.116 1.00 28.69
ATOM 670 N PRO 243 44.867 29.115 23.937 1.00 30.09
ATOM 671 CD PRO 243 44.783 27.843 24.674 1.00 28.53
ATOM 672 CA PRO 243 44.183 30.200 24.640 1.00 31.01
ATOM 673 CB PRO 243 43.829 29.577 26.005 1.00 30.34
ATOM 674 CG PRO 243 44.640 28.300 26.093 1.00 29.25
ATOM 675 C PRO 243 45.195 31.356 24.774 1.00 31.71
ATOM 676 O PRO 243 46.412 31.128 24.840 1.00 30.69
ATOM 677 N CYS 244 44.694 32.585 24.804 1.00 32.36
ATOM 678 CA CYS 244 45.539 33.763 24.920 1.00 33.57
ATOM 679 CB CYS 244 44.675 35.028 25.050 1.00 37.62
ATOM 680 SG CYS 244 45.262 36.418 24.022 1.00 51.95
ATOM 681 C CYS 244 46.536 33.660 26.081 1.00 31.12
ATOM 682 O CYS 244 47.677 34.087 25.942 1.00 30.37
ATOM 683 N GLU 245 46.124 33.045 27.194 1.00 30.00
ATOM 684 CA GLU 245 46.993 32.877 28.366 1.00 29.62
ATOM 685 CB GLU 245 46.270 32.159 29.514 1.00 33.10
ATOM 686 CG GLU 245 45.325 33.018 30.333 1.00 36.43
ATOM 687 CD GLU 245 43.882 32.940 29.860 1.00 37.87
ATOM 688 OE1 GLU 245 42.989 33.006 30.730 1.00 37.36
ATOM 689 OE2 GLU 245 43.639 32.813 28.634 1.00 39.63
ATOM 690 C GLU 245 48.239 32.077 28.030 1.00 28.34
ATOM 691 O GLU 245 49.322 32.343 28.557 1.00 27.88
ATOM 692 N ASP 246 48.063 31.043 27.213 1.00 26.10
ATOM 693 CA ASP 246 49.182 30.212 26.798 1.00 25.23
ATOM 694 CB ASP 246 48.685 28.923 26.135 1.00 26.98
ATOM 695 CG ASP 246 48.146 27.912 27.137 1.00 29.13
ATOM 696 OD1 ASP 246 48.158 28.193 28.354 1.00 26.52
ATOM 697 OD2 ASP 246 47.712 26.824 26.696 1.00 31.38
ATOM 698 C ASP 246 50.065 30.983 25.826 1.00 23.57
ATOM 699 O ASP 246 51.288 30.993 25.955 1.00 22.61
ATOM 700 N GLN 247 49.431 31.630 24.852 1.00 23.23
ATOM 701 CA GLN 247 50.144 32.408 23.855 1.00 22.20
ATOM 702 CB GLN 247 49.159 33.178 22.991 1.00 22.06
ATOM 703 CG GLN 247 48.329 32.307 22.066 1.00 22.74
ATOM 704 CD GLN 247 47.435 33.141 21.169 1.00 24.91
ATOM 705 OE1 GLN 247 47.860 34.160 20.625 1.00 26.30
ATOM 706 NE2 GLN 247 46.186 32.732 21.035 1.00 25.65
ATOM 707 C GLN 247 51.098 33.374 24.528 1.00 22.10
ATOM 708 O GLN 247 52.280 33.454 24.182 1.00 23.07
ATOM 709 N ILE 248 50.587 34.076 25.527 1.00 23.27

ATOM 710 CA ILE 248 51.379 35.042 26.276 1.00 23.21
ATOM 711 CB ILE 248 50.473 35.824 27.273 1.00 24.59
ATOM 712 CG2 ILE 248 51.304 36.682 28.242 1.00 24.09
ATOM 713 CG1 ILE 248 49.499 36.707 26.487 1.00 23.47
ATOM 714 CD1 ILE 248 48.413 37.323 27.341 1.00 23.84
ATOM 715 C ILE 248 52.568 34.387 26.986 1.00 22.27
ATOM 716 O ILE 248 53.705 34.833 26.829 1.00 22.06
ATOM 717 N ILE 249 52.321 33.313 27.729 1.00 21.40
ATOM 718 CA ILE 249 53.398 32.630 28.440 1.00 21.40
ATOM 719 CB ILE 249 52.850 31.438 29.279 1.00 23.53
ATOM 720 CG2 ILE 249 53.972 30.489 29.711 1.00 21.44
ATOM 721 CG1 ILE 249 52.098 31.963 30.500 1.00 22.76
ATOM 722 CD1 ILE 249 51.252 30.911 31.175 1.00 25.03
ATOM 723 C ILE 249 54.481 32.148 27.470 1.00 22.24
ATOM 724 O ILE 249 55.677 32.321 27.733 1.00 22.90
ATOM 725 N LEU 250 54.072 31.582 26.334 1.00 22.65
ATOM 726 CA LEU 250 55.028 31.079 25.345 1.00 21.40
ATOM 727 CB LEU 250 54.319 30.290 24.239 1.00 20.06
ATOM 728 CG LEU 250 53.566 29.038 24.677 1.00 20.22
ATOM 729 CD1 LEU 250 52.952 28.406 23.453 1.00 19.19
ATOM 730 CD2 LEU 250 54.494 28.050 25.386 1.00 18.52
ATOM 731 C LEU 250 55.850 32.209 24.736 1.00 20.82
ATOM 732 O LEU 250 57.069 32.094 24.603 1.00 20.27
ATOM 733 N LEU 251 55.179 33.302 24.384 1.00 22.14
ATOM 734 CA LEU 251 55.842 34.467 23.805 1.00 22.90
ATOM 735 CB LEU 251 54.806 35.543 23.471 1.00 22.76
ATOM 736 CG LEU 251 54.513 35.899 22.012 1.00 23.35
ATOM 737 CD1 LEU 251 55.347 35.103 21.047 1.00 22.38
ATOM 738 CD2 LEU 251 53.040 35.708 21.747 1.00 22.86
ATOM 739 C LEU 251 56.891 35.030 24.776 1.00 23.67
ATOM 740 O LEU 251 58.051 35.234 24.402 1.00 22.58
ATOM 741 N LYS 252 56.491 35.236 26.029 1.00 24.64
ATOM 742 CA LYS 252 57.395 35.754 27.057 1.00 26.22
ATOM 743 CB LYS 252 56.617 36.037 28.350 1.00 27.79
ATOM 744 CG LYS 252 55.351 36.838 28.093 1.00 32.69
ATOM 745 CD LYS 252 55.185 38.023 29.003 1.00 35.85
ATOM 746 CE LYS 252 54.773 37.626 30.397 1.00 39.34
ATOM 747 NZ LYS 252 54.477 38.870 31.168 1.00 44.60
ATOM 748 C LYS 252 58.566 34.793 27.312 1.00 25.26
ATOM 749 O LYS 252 59.701 35.222 27.555 1.00 26.67
ATOM 750 N GLY 253 58.306 33.497 27.195 1.00 23.97
ATOM 751 CA GLY 253 59.356 32.521 27.404 1.00 22.00
ATOM 752 C GLY 253 60.397 32.429 26.292 1.00 23.10
ATOM 753 O GLY 253 61.568 32.165 26.585 1.00 25.12
ATOM 754 N CYS 254 60.014 32.702 25.041 1.00 22.27
ATOM 755 CA CYS 254 60.944 32.584 23.908 1.00 20.91
ATOM 756 CB CYS 254 60.353 31.648 22.845 1.00 21.46

ATOM 757 SG CYS 254 58.992 32.385 21.893 1.00 22.92
ATOM 758 C CYS 254 61.354 33.869 23.201 1.00 19.77
ATOM 759 O CYS 254 62.215 33.834 22.316 1.00 19.88
ATOM 760 N CYS 255 60.731 34.984 23.561 1.00 19.56
ATOM 761 CA CYS 255 61.018 36.264 22.917 1.00 21.16
ATOM 762 CB CYS 255 60.292 37.407 23.634 1.00 21.21
ATOM 763 SG CYS 255 60.404 38.957 22.735 1.00 22.22
ATOM 764 C CYS 255 62.504 36.590 22.775 1.00 21.36
ATOM 765 O CYS 255 62.986 36.847 21.667 1.00 20.58
ATOM 766 N MET 256 63.232 36.574 23.887 1.00 20.52
ATOM 767 CA MET 256 64.657 36.874 23.835 1.00 20.07
ATOM 768 CB MET 256 65.255 36.967 25.253 1.00 20.39
ATOM 769 CG MET 256 66.744 37.360 25.267 1.00 19.20
ATOM 770 SD MET 256 67.066 38.952 24.447 1.00 20.26
ATOM 771 CE MET 256 68.856 38.971 24.375 1.00 18.47
ATOM 772 C MET 256 65.408 35.830 23.005 1.00 18.75
ATOM 773 O MET 256 66.305 36.164 22.225 1.00 18.15
ATOM 774 N GLU 257 65.035 34.568 23.170 1.00 19.00
ATOM 775 CA GLU 257 65.685 33.480 22.443 1.00 19.71
ATOM 776 CB GLU 257 65.104 32.145 22.882 1.00 21.15
ATOM 777 CG GLU 257 65.451 31.821 24.319 1.00 26.39
ATOM 778 CD GLU 257 64.513 30.820 24.929 1.00 30.75
ATOM 779 OE1 GLU 257 63.875 30.069 24.162 1.00 32.36
ATOM 780 OE2 GLU 257 64.415 30.783 26.172 1.00 33.70
ATOM 781 C GLU 257 65.545 33.648 20.940 1.00 18.54
ATOM 782 O GLU 257 66.521 33.506 20.197 1.00 17.58
ATOM 783 N ILE 258 64.336 33.977 20.497 1.00 17.78
ATOM 784 CA ILE 258 64.101 34.176 19.081 1.00 17.60
ATOM 785 CB ILE 258 62.590 34.267 18.765 1.00 16.35
ATOM 786 CG2 ILE 258 62.376 34.777 17.326 1.00 16.20
ATOM 787 CG1 ILE 258 61.935 32.884 18.980 1.00 17.24
ATOM 788 CD1 ILE 258 60.437 32.787 18.593 1.00 14.08
ATOM 789 C ILE 258 64.872 35.408 18.595 1.00 19.11
ATOM 790 O ILE 258 65.609 35.326 17.601 1.00 19.02
ATOM 791 N MET 259 64.785 36.517 19.341 1.00 19.71
ATOM 792 CA MET 259 65.486 37.744 18.956 1.00 18.43
ATOM 793 CB MET 259 65.162 38.890 19.910 1.00 19.99
ATOM 794 CG MET 259 63.700 39.278 19.962 1.00 21.15
ATOM 795 SD MET 259 63.452 40.921 20.700 1.00 24.33
ATOM 796 CE MET 259 63.769 40.595 22.415 1.00 22.50
ATOM 797 C MET 259 66.993 37.540 18.888 1.00 18.64
ATOM 798 O MET 259 67.638 37.993 17.941 1.00 19.96
ATOM 799 N SER 260 67.556 36.858 19.884 1.00 17.37
ATOM 800 CA SER 260 68.993 36.592 19.915 1.00 16.76
ATOM 801 CB SER 260 69.387 35.840 21.195 1.00 17.25
ATOM 802 OG SER 260 69.078 36.589 22.346 1.00 22.89
ATOM 803 C SER 260 69.387 35.750 18.717 1.00 15.13

```
ATOM   804  O   SER  260      70.460  35.941  18.137  1.00 16.62
ATOM   805  N   LEU  261      68.539  34.781  18.385  1.00 15.15
ATOM   806  CA  LEU  261      68.802  33.900  17.262  1.00 15.31
ATOM   807  CB  LEU  261      67.708  32.834  17.153  1.00 15.43
ATOM   808  CG  LEU  261      67.652  32.014  15.858  1.00 15.82
ATOM   809  CD1 LEU  261      68.963  31.251  15.621  1.00 16.35
ATOM   810  CD2 LEU  261      66.470  31.060  15.937  1.00 13.72
ATOM   811  C   LEU  261      68.839  34.741  16.001  1.00 16.31
ATOM   812  O   LEU  261      69.766  34.619  15.194  1.00 16.68
ATOM   813  N   ARG  262      67.848  35.620  15.853  1.00 16.47
ATOM   814  CA  ARG  262      67.778  36.493  14.680  1.00 16.66
ATOM   815  CB  ARG  262      66.475  37.279  14.693  1.00 16.00
ATOM   816  CG  ARG  262      65.291  36.404  14.354  1.00 15.62
ATOM   817  CD  ARG  262      63.995  37.167  14.378  1.00 17.31
ATOM   818  NE  ARG  262      62.967  36.454  13.628  1.00 20.09
ATOM   819  CZ  ARG  262      61.755  36.932  13.361  1.00 21.06
ATOM   820  NH1 ARG  262      61.390  38.136  13.787  1.00 19.02
ATOM   821  NH2 ARG  262      60.909  36.207  12.640  1.00 22.63
ATOM   822  C   ARG  262      69.003  37.396  14.527  1.00 16.80
ATOM   823  O   ARG  262      69.440  37.664  13.412  1.00 16.82
ATOM   824  N   ALA  263      69.578  37.832  15.650  1.00 17.77
ATOM   825  CA  ALA  263      70.795  38.647  15.637  1.00 18.41
ATOM   826  CB  ALA  263      70.996  39.337  17.004  1.00 18.26
ATOM   827  C   ALA  263      71.998  37.740  15.327  1.00 19.15
ATOM   828  O   ALA  263      72.837  38.063  14.475  1.00 19.40
ATOM   829  N   ALA  264      72.056  36.587  15.996  1.00 19.84
ATOM   830  CA  ALA  264      73.155  35.633  15.818  1.00 20.35
ATOM   831  CB  ALA  264      73.045  34.483  16.832  1.00 18.09
ATOM   832  C   ALA  264      73.289  35.079  14.398  1.00 20.66
ATOM   833  O   ALA  264      74.406  34.870  13.922  1.00 21.04
ATOM   834  N   VAL  265      72.173  34.822  13.723  1.00 21.14
ATOM   835  CA  VAL  265      72.249  34.299  12.358  1.00 22.96
ATOM   836  CB  VAL  265      70.910  33.660  11.879  1.00 21.04
ATOM   837  CG1 VAL  265      70.458  32.600  12.866  1.00 19.48
ATOM   838  CG2 VAL  265      69.838  34.708  11.698  1.00 18.96
ATOM   839  C   VAL  265      72.718  35.387  11.382  1.00 24.66
ATOM   840  O   VAL  265      73.026  35.103  10.224  1.00 26.03
ATOM   841  N   ARG  266      72.777  36.628  11.858  1.00 25.11
ATOM   842  CA  ARG  266      73.233  37.729  11.031  1.00 25.60
ATOM   843  CB  ARG  266      72.187  38.819  10.964  1.00 24.09
ATOM   844  CG  ARG  266      71.035  38.427  10.088  1.00 23.37
ATOM   845  CD  ARG  266      69.998  39.492  10.098  1.00 24.80
ATOM   846  NE  ARG  266      68.961  39.253   9.109  1.00 24.01
ATOM   847  CZ  ARG  266      67.833  39.940   9.069  1.00 23.26
ATOM   848  NH1 ARG  266      67.613  40.880   9.970  1.00 24.16
ATOM   849  NH2 ARG  266      66.960  39.733   8.099  1.00 23.31
ATOM   850  C   ARG  266      74.543  38.273  11.543  1.00 28.07
```

ATOM 851 O ARG 266 74.786 39.479 11.517 1.00 29.67
ATOM 852 N TYR 267 75.367 37.366 12.053 1.00 28.90
ATOM 853 CA TYR 267 76.679 37.714 12.558 1.00 30.23
ATOM 854 CB TYR 267 77.223 36.584 13.434 1.00 29.98
ATOM 855 CG TYR 267 78.699 36.702 13.727 1.00 31.75
ATOM 856 CD1 TYR 267 79.179 37.577 14.712 1.00 31.21
ATOM 857 CE1 TYR 267 80.544 37.705 14.950 1.00 31.29
ATOM 858 CD2 TYR 267 79.625 35.958 12.994 1.00 31.84
ATOM 859 CE2 TYR 267 80.986 36.078 13.222 1.00 32.15
ATOM 860 CZ TYR 267 81.442 36.949 14.197 1.00 32.60
ATOM 861 OH TYR 267 82.801 37.052 14.389 1.00 34.13
ATOM 862 C TYR 267 77.570 37.900 11.343 1.00 31.17
ATOM 863 O TYR 267 77.543 37.086 10.426 1.00 30.91
ATOM 864 N ASP 268 78.361 38.966 11.336 1.00 33.09
ATOM 865 CA ASP 268 79.252 39.233 10.216 1.00 35.57
ATOM 866 CB ASP 268 79.085 40.679 9.747 1.00 39.39
ATOM 867 CG ASP 268 79.796 40.954 8.432 1.00 42.22
ATOM 868 OD1 ASP 268 79.426 40.331 7.412 1.00 46.07
ATOM 869 OD2 ASP 268 80.718 41.798 8.415 1.00 44.30
ATOM 870 C ASP 268 80.700 38.967 10.620 1.00 35.72
ATOM 871 O ASP 268 81.287 39.737 11.384 1.00 34.49
ATOM 872 N PRO 269 81.295 37.872 10.108 1.00 37.00
ATOM 873 CD PRO 269 80.712 36.887 9.182 1.00 36.77
ATOM 874 CA PRO 269 82.679 37.514 10.427 1.00 38.52
ATOM 875 CB PRO 269 82.905 36.239 9.611 1.00 37.06
ATOM 876 CG PRO 269 81.549 35.669 9.453 1.00 36.19
ATOM 877 C PRO 269 83.656 38.613 10.019 1.00 40.96
ATOM 878 O PRO 269 84.586 38.929 10.760 1.00 42.23
ATOM 879 N ALA 270 83.418 39.209 8.854 1.00 41.92
ATOM 880 CA ALA 270 84.277 40.272 8.342 1.00 42.08
ATOM 881 CB ALA 270 83.709 40.838 7.029 1.00 42.64
ATOM 882 C ALA 270 84.495 41.394 9.355 1.00 41.70
ATOM 883 O ALA 270 85.632 41.709 9.684 1.00 42.25
ATOM 884 N SER 271 83.408 41.970 9.865 1.00 41.87
ATOM 885 CA SER 271 83.495 43.073 10.830 1.00 40.75
ATOM 886 CB SER 271 82.454 44.143 10.500 1.00 40.60
ATOM 887 OG SER 271 81.150 43.590 10.464 1.00 40.31
ATOM 888 C SER 271 83.344 42.658 12.290 1.00 39.99
ATOM 889 O SER 271 83.484 43.487 13.194 1.00 38.77
ATOM 890 N ASP 272 83.042 41.381 12.508 1.00 38.94
ATOM 891 CA ASP 272 82.859 40.844 13.845 1.00 37.78
ATOM 892 CB ASP 272 84.182 40.904 14.625 1.00 38.86
ATOM 893 CG ASP 272 84.094 40.255 16.000 1.00 41.09
ATOM 894 OD1 ASP 272 83.342 39.275 16.173 1.00 41.64
ATOM 895 OD2 ASP 272 84.781 40.734 16.924 1.00 43.84
ATOM 896 C ASP 272 81.744 41.634 14.536 1.00 36.92
ATOM 897 O ASP 272 81.907 42.156 15.648 1.00 37.56

```
ATOM    898  N   THR  273      80.603  41.723  13.865  1.00 33.65
ATOM    899  CA  THR  273      79.469  42.443  14.425  1.00 31.57
ATOM    900  CB  THR  273      79.246  43.790  13.695  1.00 31.69
ATOM    901  OG1 THR  273      79.087  43.557  12.289  1.00 30.71
ATOM    902  CG2 THR  273      80.426  44.730  13.922  1.00 31.53
ATOM    903  C   THR  273      78.184  41.631  14.310  1.00 30.15
ATOM    904  O   THR  273      78.104  40.697  13.504  1.00 30.10
ATOM    905  N   LEU  274      77.213  41.942  15.164  1.00 27.09
ATOM    906  CA  LEU  274      75.907  41.303  15.103  1.00 25.94
ATOM    907  CB  LEU  274      75.396  40.936  16.496  1.00 24.47
ATOM    908  CG  LEU  274      76.020  39.731  17.206  1.00 23.33
ATOM    909  CD1 LEU  274      75.436  39.631  18.602  1.00 21.14
ATOM    910  CD2 LEU  274      75.792  38.444  16.427  1.00 20.04
ATOM    911  C   LEU  274      75.010  42.377  14.500  1.00 26.57
ATOM    912  O   LEU  274      75.339  43.557  14.568  1.00 27.03
ATOM    913  N   THR  275      73.914  41.987  13.865  1.00 26.60
ATOM    914  CA  THR  275      73.009  42.966  13.285  1.00 26.48
ATOM    915  CB  THR  275      72.786  42.717  11.781  1.00 26.52
ATOM    916  OG1 THR  275      74.044  42.719  11.097  1.00 28.67
ATOM    917  CG2 THR  275      71.919  43.799  11.198  1.00 27.35
ATOM    918  C   THR  275      71.674  42.898  14.014  1.00 26.57
ATOM    919  O   THR  275      71.069  41.825  14.121  1.00 28.50
ATOM    920  N   LEU  276      71.236  44.026  14.564  1.00 25.18
ATOM    921  CA  LEU  276      69.970  44.069  15.276  1.00 24.61
ATOM    922  CB  LEU  276      70.057  44.987  16.506  1.00 23.61
ATOM    923  CG  LEU  276      71.199  44.730  17.503  1.00 24.36
ATOM    924  CD1 LEU  276      71.039  45.654  18.709  1.00 19.91
ATOM    925  CD2 LEU  276      71.225  43.253  17.947  1.00 22.20
ATOM    926  C   LEU  276      68.894  44.560  14.322  1.00 25.63
ATOM    927  O   LEU  276      69.100  45.556  13.623  1.00 25.35
ATOM    928  N   SER  277      67.787  43.814  14.249  1.00 25.94
ATOM    929  CA  SER  277      66.634  44.141  13.403  1.00 24.61
ATOM    930  CB  SER  277      65.874  45.335  13.987  1.00 21.96
ATOM    931  OG  SER  277      65.368  45.029  15.273  1.00 19.68
ATOM    932  C   SER  277      67.005  44.406  11.946  1.00 25.20
ATOM    933  O   SER  277      66.350  45.199  11.267  1.00 25.21
ATOM    934  N   GLY  278      68.067  43.747  11.489  1.00 27.08
ATOM    935  CA  GLY  278      68.556  43.899  10.127  1.00 29.27
ATOM    936  C   GLY  278      69.022  45.297   9.753  1.00 31.57
ATOM    937  O   GLY  278      69.303  45.564   8.591  1.00 31.42
ATOM    938  N   GLU  279      69.159  46.177  10.740  1.00 33.41
ATOM    939  CA  GLU  279      69.558  47.560  10.484  1.00 34.84
ATOM    940  CB  GLU  279      68.345  48.485  10.650  1.00 36.16
ATOM    941  CG  GLU  279      67.843  48.606  12.090  1.00 38.08
ATOM    942  CD  GLU  279      66.566  49.419  12.206  1.00 41.07
ATOM    943  OE1 GLU  279      66.475  50.279  13.108  1.00 41.98
ATOM    944  OE2 GLU  279      65.643  49.197  11.399  1.00 43.80
```

ATOM 945 C GLU 279 70.706 48.116 11.326 1.00 34.38
ATOM 946 O GLU 279 71.366 49.057 10.901 1.00 35.60
ATOM 947 N MET 280 70.944 47.565 12.511 1.00 33.43
ATOM 948 CA MET 280 72.014 48.085 13.358 1.00 32.27
ATOM 949 CB MET 280 71.443 48.544 14.702 1.00 31.81
ATOM 950 CG MET 280 72.471 49.181 15.637 1.00 29.76
ATOM 951 SD MET 280 71.813 49.482 17.289 1.00 29.63
ATOM 952 CE MET 280 70.592 50.735 16.989 1.00 24.91
ATOM 953 C MET 280 73.161 47.119 13.603 1.00 32.51
ATOM 954 O MET 280 72.995 46.117 14.303 1.00 32.78
ATOM 955 N ALA 281 74.321 47.408 13.021 1.00 31.74
ATOM 956 CA ALA 281 75.491 46.564 13.231 1.00 32.25
ATOM 957 CB ALA 281 76.494 46.740 12.108 1.00 30.91
ATOM 958 C ALA 281 76.091 47.006 14.563 1.00 33.09
ATOM 959 O ALA 281 76.261 48.202 14.805 1.00 34.06
ATOM 960 N VAL 282 76.358 46.053 15.447 1.00 33.78
ATOM 961 CA VAL 282 76.913 46.366 16.755 1.00 33.45
ATOM 962 CB VAL 282 75.858 46.208 17.885 1.00 34.92
ATOM 963 CG1 VAL 282 74.775 47.269 17.744 1.00 34.90
ATOM 964 CG2 VAL 282 75.246 44.806 17.860 1.00 34.39
ATOM 965 C VAL 282 78.119 45.514 17.087 1.00 33.93
ATOM 966 O VAL 282 78.202 44.347 16.702 1.00 35.11
ATOM 967 N LYS 283 79.071 46.123 17.777 1.00 33.49
ATOM 968 CA LYS 283 80.285 45.446 18.187 1.00 34.83
ATOM 969 CB LYS 283 81.446 46.445 18.183 1.00 35.96
ATOM 970 CG LYS 283 81.726 47.013 16.797 1.00 39.20
ATOM 971 CD LYS 283 82.621 48.245 16.844 1.00 43.38
ATOM 972 CE LYS 283 83.142 48.611 15.455 1.00 44.17
ATOM 973 NZ LYS 283 84.077 47.563 14.922 1.00 47.27
ATOM 974 C LYS 283 80.068 44.832 19.572 1.00 33.94
ATOM 975 O LYS 283 79.134 45.215 20.290 1.00 33.85
ATOM 976 N ARG 284 80.939 43.895 19.941 1.00 33.63
ATOM 977 CA ARG 284 80.873 43.184 21.217 1.00 34.00
ATOM 978 CB ARG 284 82.094 42.285 21.381 1.00 34.04
ATOM 979 CG ARG 284 82.332 41.369 20.219 1.00 36.31
ATOM 980 CD ARG 284 83.638 40.643 20.354 1.00 37.03
ATOM 981 NE ARG 284 83.724 39.576 19.369 1.00 39.27
ATOM 982 CZ ARG 284 83.323 38.326 19.583 1.00 40.07
ATOM 983 NH1 ARG 284 82.804 37.973 20.759 1.00 39.78
ATOM 984 NH2 ARG 284 83.434 37.428 18.613 1.00 40.16
ATOM 985 C ARG 284 80.787 44.101 22.419 1.00 35.16
ATOM 986 O ARG 284 79.884 43.977 23.249 1.00 35.87
ATOM 987 N GLU 285 81.763 44.993 22.530 1.00 35.75
ATOM 988 CA GLU 285 81.827 45.939 23.632 1.00 36.86
ATOM 989 CB GLU 285 83.071 46.818 23.464 1.00 40.47
ATOM 990 CG GLU 285 83.202 47.973 24.444 1.00 49.23
ATOM 991 CD GLU 285 83.587 49.284 23.747 1.00 54.22

ATOM 992 OE1 GLU 285 84.784 49.657 23.760 1.00 55.37
ATOM 993 OE2 GLU 285 82.686 49.942 23.176 1.00 56.95
ATOM 994 C GLU 285 80.552 46.785 23.684 1.00 34.45
ATOM 995 O GLU 285 79.990 47.007 24.754 1.00 34.47
ATOM 996 N GLN 286 80.046 47.166 22.515 1.00 32.27
ATOM 997 CA GLN 286 78.853 47.991 22.438 1.00 30.35
ATOM 998 CB GLN 286 78.615 48.472 21.006 1.00 33.34
ATOM 999 CG GLN 286 79.632 49.497 20.500 1.00 35.09
ATOM 1000 CD GLN 286 79.293 50.023 19.108 1.00 38.42
ATOM 1001 OE1 GLN 286 79.161 49.248 18.158 1.00 39.03
ATOM 1002 NE2 GLN 286 79.156 51.339 18.982 1.00 37.82
ATOM 1003 C GLN 286 77.605 47.308 22.970 1.00 29.57
ATOM 1004 O GLN 286 76.870 47.891 23.770 1.00 26.96
ATOM 1005 N LEU 287 77.352 46.080 22.524 1.00 29.50
ATOM 1006 CA LEU 287 76.164 45.350 22.979 1.00 28.93
ATOM 1007 CB LEU 287 75.831 44.182 22.029 1.00 27.14
ATOM 1008 CG LEU 287 74.474 43.484 22.227 1.00 24.66
ATOM 1009 CD1 LEU 287 73.316 44.475 22.184 1.00 22.70
ATOM 1010 CD2 LEU 287 74.297 42.413 21.163 1.00 25.17
ATOM 1011 C LEU 287 76.303 44.874 24.433 1.00 28.10
ATOM 1012 O LEU 287 75.301 44.748 25.155 1.00 28.58
ATOM 1013 N LYS 288 77.541 44.652 24.868 1.00 27.97
ATOM 1014 CA LYS 288 77.808 44.218 26.230 1.00 28.55
ATOM 1015 CB LYS 288 79.270 43.800 26.376 1.00 28.93
ATOM 1016 CG LYS 288 79.603 43.254 27.750 1.00 32.46
ATOM 1017 CD LYS 288 81.015 42.725 27.826 1.00 33.48
ATOM 1018 CE LYS 288 81.205 41.878 29.071 1.00 35.76
ATOM 1019 NZ LYS 288 82.525 41.186 29.029 1.00 40.52
ATOM 1020 C LYS 288 77.497 45.341 27.220 1.00 29.15
ATOM 1021 O LYS 288 76.782 45.132 28.207 1.00 31.28
ATOM 1022 N ASN 289 77.996 46.539 26.933 1.00 28.58
ATOM 1023 CA ASN 289 77.794 47.692 27.811 1.00 28.40
ATOM 1024 CB ASN 289 78.815 48.775 27.485 1.00 28.28
ATOM 1025 CG ASN 289 80.224 48.329 27.770 1.00 31.30
ATOM 1026 OD1 ASN 289 80.445 47.442 28.601 1.00 33.02
ATOM 1027 ND2 ASN 289 81.190 48.928 27.087 1.00 30.49
ATOM 1028 C ASN 289 76.395 48.278 27.792 1.00 28.33
ATOM 1029 O ASN 289 76.005 48.977 28.724 1.00 28.36
ATOM 1030 N GLY 290 75.638 47.977 26.740 1.00 26.71
ATOM 1031 CA GLY 290 74.286 48.487 26.606 1.00 23.27
ATOM 1032 C GLY 290 73.233 47.852 27.484 1.00 22.93
ATOM 1033 O GLY 290 72.063 48.219 27.399 1.00 23.84
ATOM 1034 N GLY 291 73.620 46.905 28.330 1.00 21.30
ATOM 1035 CA GLY 291 72.637 46.290 29.199 1.00 20.38
ATOM 1036 C GLY 291 72.653 44.778 29.200 1.00 20.05
ATOM 1037 O GLY 291 72.190 44.165 30.147 1.00 21.91
ATOM 1038 N LEU 292 73.211 44.173 28.160 1.00 21.36

ATOM 1039 CA LEU 292 73.248 42.717 28.062 1.00 21.51
ATOM 1040 CB LEU 292 73.319 42.280 26.593 1.00 18.52
ATOM 1041 CG LEU 292 72.019 42.506 25.815 1.00 17.07
ATOM 1042 CD1 LEU 292 72.103 41.818 24.479 1.00 18.09
ATOM 1043 CD2 LEU 292 70.844 41.947 26.599 1.00 16.35
ATOM 1044 C LEU 292 74.347 42.046 28.872 1.00 22.17
ATOM 1045 O LEU 292 74.176 40.923 29.352 1.00 21.91
ATOM 1046 N GLY 293 75.479 42.724 29.011 1.00 23.76
ATOM 1047 CA GLY 293 76.588 42.169 29.760 1.00 23.92
ATOM 1048 C GLY 293 77.134 40.926 29.091 1.00 25.09
ATOM 1049 O GLY 293 77.362 40.919 27.883 1.00 26.51
ATOM 1050 N VAL 294 77.332 39.866 29.867 1.00 26.08
ATOM 1051 CA VAL 294 77.854 38.618 29.329 1.00 26.34
ATOM 1052 CB VAL 294 78.263 37.636 30.443 1.00 26.97
ATOM 1053 CG1 VAL 294 79.440 38.199 31.209 1.00 28.20
ATOM 1054 CG2 VAL 294 77.099 37.371 31.384 1.00 25.56
ATOM 1055 C VAL 294 76.891 37.937 28.360 1.00 26.41
ATOM 1056 O VAL 294 77.315 37.097 27.568 1.00 27.65
ATOM 1057 N VAL 295 75.608 38.304 28.408 1.00 26.09
ATOM 1058 CA VAL 295 74.606 37.740 27.499 1.00 26.65
ATOM 1059 CB VAL 295 73.186 38.312 27.777 1.00 28.39
ATOM 1060 CG1 VAL 295 72.164 37.740 26.782 1.00 26.69
ATOM 1061 CG2 VAL 295 72.763 38.005 29.206 1.00 26.23
ATOM 1062 C VAL 295 75.035 38.089 26.069 1.00 25.83
ATOM 1063 O VAL 295 74.903 37.286 25.151 1.00 27.12
ATOM 1064 N SER 296 75.609 39.275 25.908 1.00 24.95
ATOM 1065 CA SER 296 76.097 39.725 24.619 1.00 26.17
ATOM 1066 CB SER 296 76.665 41.132 24.742 1.00 25.82
ATOM 1067 OG SER 296 77.253 41.554 23.525 1.00 26.64
ATOM 1068 C SER 296 77.196 38.783 24.142 1.00 28.63
ATOM 1069 O SER 296 77.241 38.420 22.963 1.00 29.19
ATOM 1070 N ASP 297 78.118 38.443 25.046 1.00 29.69
ATOM 1071 CA ASP 297 79.211 37.531 24.731 1.00 28.96
ATOM 1072 CB ASP 297 80.058 37.234 25.973 1.00 31.82
ATOM 1073 CG ASP 297 80.768 38.454 26.506 1.00 35.23
ATOM 1074 OD1 ASP 297 80.958 39.429 25.743 1.00 35.71
ATOM 1075 OD2 ASP 297 81.140 38.430 27.698 1.00 37.68
ATOM 1076 C ASP 297 78.605 36.227 24.247 1.00 27.63
ATOM 1077 O ASP 297 79.048 35.666 23.248 1.00 29.88
ATOM 1078 N ALA 298 77.581 35.762 24.952 1.00 25.15
ATOM 1079 CA ALA 298 76.909 34.527 24.592 1.00 24.49
ATOM 1080 CB ALA 298 75.811 34.224 25.594 1.00 21.91
ATOM 1081 C ALA 298 76.343 34.569 23.158 1.00 24.93
ATOM 1082 O ALA 298 76.589 33.654 22.357 1.00 24.83
ATOM 1083 N ILE 299 75.632 35.647 22.814 1.00 24.70
ATOM 1084 CA ILE 299 75.041 35.756 21.480 1.00 22.49
ATOM 1085 CB ILE 299 74.057 36.950 21.351 1.00 21.96

ATOM 1086 CG2 ILE 299 73.338 36.876 20.005 1.00 19.17
ATOM 1087 CG1 ILE 299 72.994 36.876 22.459 1.00 21.16
ATOM 1088 CD1 ILE 299 72.363 38.228 22.853 1.00 22.04
ATOM 1089 C ILE 299 76.127 35.829 20.428 1.00 22.33
ATOM 1090 O ILE 299 75.995 35.234 19.367 1.00 24.80
ATOM 1091 N PHE 300 77.209 36.538 20.724 1.00 21.92
ATOM 1092 CA PHE 300 78.322 36.641 19.785 1.00 23.08
ATOM 1093 CB PHE 300 79.385 37.636 20.278 1.00 24.08
ATOM 1094 CG PHE 300 79.249 39.017 19.686 1.00 24.18
ATOM 1095 CD1 PHE 300 78.494 39.991 20.325 1.00 22.64
ATOM 1096 CD2 PHE 300 79.857 39.331 18.471 1.00 23.76
ATOM 1097 CE1 PHE 300 78.347 41.253 19.770 1.00 22.38
ATOM 1098 CE2 PHE 300 79.715 40.596 17.904 1.00 23.21
ATOM 1099 CZ PHE 300 78.957 41.558 18.554 1.00 22.46
ATOM 1100 C PHE 300 78.948 35.274 19.561 1.00 23.06
ATOM 1101 O PHE 300 79.264 34.913 18.426 1.00 23.97
ATOM 1102 N GLU 301 79.113 34.506 20.636 1.00 23.75
ATOM 1103 CA GLU 301 79.694 33.169 20.525 1.00 24.16
ATOM 1104 CB GLU 301 79.884 32.545 21.902 1.00 23.03
ATOM 1105 C GLU 301 78.776 32.302 19.672 1.00 23.62
ATOM 1106 O GLU 301 79.240 31.591 18.777 1.00 25.11
ATOM 1107 N LEU 302 77.472 32.394 19.926 1.00 23.12
ATOM 1108 CA LEU 302 76.495 31.624 19.166 1.00 23.56
ATOM 1109 CB LEU 302 75.082 31.865 19.701 1.00 21.75
ATOM 1110 CG LEU 302 73.953 31.120 18.979 1.00 22.61
ATOM 1111 CD1 LEU 302 74.084 29.612 19.193 1.00 22.31
ATOM 1112 CD2 LEU 302 72.611 31.604 19.485 1.00 19.27
ATOM 1113 C LEU 302 76.588 32.011 17.687 1.00 24.41
ATOM 1114 O LEU 302 76.670 31.140 16.814 1.00 24.63
ATOM 1115 N GLY 303 76.651 33.316 17.425 1.00 25.69
ATOM 1116 CA GLY 303 76.746 33.816 16.062 1.00 25.87
ATOM 1117 C GLY 303 77.975 33.288 15.338 1.00 28.63
ATOM 1118 O GLY 303 77.893 32.895 14.170 1.00 28.30
ATOM 1119 N LYS 304 79.116 33.279 16.023 1.00 29.53
ATOM 1120 CA LYS 304 80.360 32.791 15.437 1.00 31.18
ATOM 1121 CB LYS 304 81.529 32.931 16.418 1.00 34.79
ATOM 1122 CG LYS 304 82.157 34.307 16.506 1.00 40.28
ATOM 1123 CD LYS 304 83.441 34.262 17.332 1.00 44.37
ATOM 1124 CE LYS 304 83.174 33.814 18.775 1.00 47.63
ATOM 1125 NZ LYS 304 82.459 34.847 19.592 1.00 48.83
ATOM 1126 C LYS 304 80.245 31.328 15.042 1.00 30.87
ATOM 1127 O LYS 304 80.632 30.944 13.932 1.00 29.53
ATOM 1128 N SER 305 79.720 30.518 15.961 1.00 30.46
ATOM 1129 CA SER 305 79.566 29.086 15.731 1.00 31.09
ATOM 1130 CB SER 305 79.243 28.370 17.041 1.00 29.83
ATOM 1131 OG SER 305 77.990 28.783 17.550 1.00 34.66
ATOM 1132 C SER 305 78.532 28.732 14.653 1.00 31.06

ATOM 1133 O SER 305 78.745 27.799 13.872 1.00 31.84
ATOM 1134 N LEU 306 77.436 29.491 14.594 1.00 29.43
ATOM 1135 CA LEU 306 76.378 29.258 13.611 1.00 28.39
ATOM 1136 CB LEU 306 75.121 30.055 13.962 1.00 26.05
ATOM 1137 CG LEU 306 74.306 29.573 15.157 1.00 26.33
ATOM 1138 CD1 LEU 306 73.061 30.430 15.285 1.00 26.22
ATOM 1139 CD2 LEU 306 73.924 28.110 14.985 1.00 25.86
ATOM 1140 C LEU 306 76.754 29.529 12.157 1.00 28.66
ATOM 1141 O LEU 306 76.116 29.001 11.253 1.00 28.58
ATOM 1142 N SER 307 77.786 30.338 11.931 1.00 29.72
ATOM 1143 CA SER 307 78.224 30.667 10.577 1.00 31.19
ATOM 1144 CB SER 307 79.466 31.556 10.617 1.00 30.15
ATOM 1145 OG SER 307 79.226 32.710 11.396 1.00 35.19
ATOM 1146 C SER 307 78.531 29.412 9.777 1.00 32.75
ATOM 1147 O SER 307 78.110 29.283 8.621 1.00 33.09
ATOM 1148 N ALA 308 79.248 28.482 10.407 1.00 33.36
ATOM 1149 CA ALA 308 79.626 27.223 9.769 1.00 34.50
ATOM 1150 CB ALA 308 80.636 26.473 10.637 1.00 33.55
ATOM 1151 C ALA 308 78.417 26.328 9.466 1.00 35.00
ATOM 1152 O ALA 308 78.469 25.501 8.550 1.00 37.10
ATOM 1153 N PHE 309 77.335 26.496 10.226 1.00 32.76
ATOM 1154 CA PHE 309 76.134 25.698 10.028 1.00 31.73
ATOM 1155 CB PHE 309 75.214 25.818 11.232 1.00 30.04
ATOM 1156 CG PHE 309 75.705 25.091 12.438 1.00 31.19
ATOM 1157 CD1 PHE 309 74.973 24.048 12.975 1.00 31.61
ATOM 1158 CD2 PHE 309 76.884 25.459 13.054 1.00 31.92
ATOM 1159 CE1 PHE 309 75.400 23.391 14.110 1.00 31.22
ATOM 1160 CE2 PHE 309 77.320 24.807 14.194 1.00 31.01
ATOM 1161 CZ PHE 309 76.577 23.771 14.720 1.00 30.47
ATOM 1162 C PHE 309 75.364 26.050 8.753 1.00 31.53
ATOM 1163 O PHE 309 74.516 25.269 8.310 1.00 31.28
ATOM 1164 N ASN 310 75.661 27.220 8.181 1.00 31.12
ATOM 1165 CA ASN 310 75.020 27.711 6.957 1.00 30.34
ATOM 1166 CB ASN 310 75.636 27.036 5.719 1.00 31.63
ATOM 1167 C ASN 310 73.511 27.492 7.003 1.00 29.40
ATOM 1168 O ASN 310 72.939 26.791 6.156 1.00 29.15
ATOM 1169 N LEU 311 72.875 28.055 8.026 1.00 27.60
ATOM 1170 CA LEU 311 71.435 27.907 8.205 1.00 28.23
ATOM 1171 CB LEU 311 71.021 28.313 9.621 1.00 27.41
ATOM 1172 CG LEU 311 71.603 27.558 10.822 1.00 26.80
ATOM 1173 CD1 LEU 311 70.949 28.078 12.112 1.00 25.05
ATOM 1174 CD2 LEU 311 71.360 26.062 10.662 1.00 24.72
ATOM 1175 C LEU 311 70.628 28.719 7.192 1.00 29.01
ATOM 1176 O LEU 311 71.040 29.808 6.782 1.00 30.66
ATOM 1177 N ASP 312 69.503 28.168 6.748 1.00 26.30
ATOM 1178 CA ASP 312 68.675 28.894 5.817 1.00 25.13
ATOM 1179 CB ASP 312 68.391 28.067 4.539 1.00 23.90

```
ATOM   1180  CG  ASP   312      67.438  26.890   4.754  1.00 21.34
ATOM   1181  OD1 ASP   312      66.959  26.631   5.868  1.00 22.47
ATOM   1182  OD2 ASP   312      67.154  26.206   3.758  1.00 22.18
ATOM   1183  C   ASP   312      67.419  29.379   6.542  1.00 24.49
ATOM   1184  O   ASP   312      67.221  29.056   7.725  1.00 24.01
ATOM   1185  N   ASP   313      66.587  30.153   5.845  1.00 23.40
ATOM   1186  CA  ASP   313      65.363  30.697   6.421  1.00 22.63
ATOM   1187  CB  ASP   313      64.557  31.486   5.385  1.00 24.99
ATOM   1188  CG  ASP   313      65.224  32.799   4.994  1.00 28.02
ATOM   1189  OD1 ASP   313      66.036  33.334   5.778  1.00 30.34
ATOM   1190  OD2 ASP   313      64.936  33.306   3.897  1.00 30.41
ATOM   1191  C   ASP   313      64.480  29.650   7.053  1.00 21.47
ATOM   1192  O   ASP   313      63.853  29.917   8.082  1.00 21.76
ATOM   1193  N   THR   314      64.407  28.474   6.435  1.00 19.16
ATOM   1194  CA  THR   314      63.580  27.386   6.966  1.00 18.79
ATOM   1195  CB  THR   314      63.398  26.240   5.913  1.00 19.68
ATOM   1196  OG1 THR   314      62.743  26.758   4.747  1.00 20.56
ATOM   1197  CG2 THR   314      62.558  25.112   6.482  1.00 18.84
ATOM   1198  C   THR   314      64.133  26.818   8.293  1.00 15.38
ATOM   1199  O   THR   314      63.383  26.538   9.223  1.00 14.08
ATOM   1200  N   GLU   315      65.445  26.656   8.376  1.00 15.16
ATOM   1201  CA  GLU   315      66.051  26.126   9.593  1.00 16.78
ATOM   1202  CB  GLU   315      67.513  25.785   9.340  1.00 14.29
ATOM   1203  CG  GLU   315      67.611  24.483   8.579  1.00 15.13
ATOM   1204  CD  GLU   315      68.910  24.291   7.872  1.00 15.90
ATOM   1205  OE1 GLU   315      69.625  25.285   7.639  1.00 19.80
ATOM   1206  OE2 GLU   315      69.211  23.129   7.527  1.00 19.34
ATOM   1207  C   GLU   315      65.872  27.119  10.736  1.00 17.27
ATOM   1208  O   GLU   315      65.457  26.742  11.836  1.00 17.46
ATOM   1209  N   VAL   316      66.081  28.399  10.440  1.00 17.12
ATOM   1210  CA  VAL   316      65.897  29.441  11.446  1.00 16.92
ATOM   1211  CB  VAL   316      66.336  30.828  10.918  1.00 15.89
ATOM   1212  CG1 VAL   316      66.062  31.921  11.962  1.00 14.60
ATOM   1213  CG2 VAL   316      67.811  30.785  10.579  1.00 15.95
ATOM   1214  C   VAL   316      64.430  29.472  11.869  1.00 17.32
ATOM   1215  O   VAL   316      64.131  29.582  13.055  1.00 18.11
ATOM   1216  N   ALA   317      63.515  29.324  10.905  1.00 17.42
ATOM   1217  CA  ALA   317      62.076  29.342  11.195  1.00 16.21
ATOM   1218  CB  ALA   317      61.262  29.321   9.910  1.00 14.63
ATOM   1219  C   ALA   317      61.656  28.181  12.079  1.00 16.84
ATOM   1220  O   ALA   317      60.904  28.359  13.036  1.00 16.08
ATOM   1221  N   LEU   318      62.146  26.990  11.759  1.00 17.27
ATOM   1222  CA  LEU   318      61.783  25.804  12.526  1.00 17.88
ATOM   1223  CB  LEU   318      62.141  24.525  11.748  1.00 17.58
ATOM   1224  CG  LEU   318      61.331  24.333  10.439  1.00 16.87
ATOM   1225  CD1 LEU   318      61.837  23.155   9.658  1.00 15.79
ATOM   1226  CD2 LEU   318      59.860  24.149  10.728  1.00 14.08
```

ATOM 1227 C LEU 318 62.394 25.852 13.932 1.00 18.20
ATOM 1228 O LEU 318 61.733 25.495 14.910 1.00 18.71
ATOM 1229 N LEU 319 63.614 26.380 14.034 1.00 17.73
ATOM 1230 CA LEU 319 64.288 26.531 15.321 1.00 16.57
ATOM 1231 CB LEU 319 65.689 27.105 15.107 1.00 18.81
ATOM 1232 CG LEU 319 66.733 27.223 16.224 1.00 21.77
ATOM 1233 CD1 LEU 319 66.767 25.994 17.117 1.00 23.03
ATOM 1234 CD2 LEU 319 68.076 27.421 15.554 1.00 20.86
ATOM 1235 C LEU 319 63.433 27.471 16.160 1.00 16.07
ATOM 1236 O LEU 319 63.134 27.183 17.319 1.00 16.40
ATOM 1237 N GLN 320 62.948 28.546 15.545 1.00 13.91
ATOM 1238 CA GLN 320 62.101 29.490 16.253 1.00 13.86
ATOM 1239 CB GLN 320 61.782 30.697 15.373 1.00 13.26
ATOM 1240 CG GLN 320 62.994 31.553 15.080 1.00 12.17
ATOM 1241 CD GLN 320 62.691 32.802 14.253 1.00 13.98
ATOM 1242 OE1 GLN 320 63.597 33.568 13.950 1.00 15.61
ATOM 1243 NE2 GLN 320 61.436 32.993 13.862 1.00 13.85
ATOM 1244 C GLN 320 60.813 28.832 16.746 1.00 14.52
ATOM 1245 O GLN 320 60.367 29.087 17.864 1.00 15.12
ATOM 1246 N ALA 321 60.211 27.982 15.924 1.00 14.21
ATOM 1247 CA ALA 321 58.976 27.298 16.309 1.00 15.04
ATOM 1248 CB ALA 321 58.408 26.519 15.115 1.00 13.84
ATOM 1249 C ALA 321 59.217 26.349 17.487 1.00 15.98
ATOM 1250 O ALA 321 58.358 26.197 18.355 1.00 15.12
ATOM 1251 N VAL 322 60.373 25.687 17.488 1.00 16.63
ATOM 1252 CA VAL 322 60.720 24.757 18.557 1.00 18.74
ATOM 1253 CB VAL 322 62.012 23.943 18.231 1.00 19.42
ATOM 1254 CG1 VAL 322 62.493 23.154 19.455 1.00 19.45
ATOM 1255 CG2 VAL 322 61.745 22.986 17.083 1.00 19.05
ATOM 1256 C VAL 322 60.910 25.556 19.833 1.00 18.42
ATOM 1257 O VAL 322 60.421 25.164 20.886 1.00 19.46
ATOM 1258 N LEU 323 61.607 26.685 19.735 1.00 18.65
ATOM 1259 CA LEU 323 61.836 27.543 20.894 1.00 18.49
ATOM 1260 CB LEU 323 62.710 28.740 20.508 1.00 18.36
ATOM 1261 CG LEU 323 64.179 28.449 20.186 1.00 18.13
ATOM 1262 CD1 LEU 323 64.829 29.669 19.585 1.00 17.37
ATOM 1263 CD2 LEU 323 64.923 27.999 21.447 1.00 17.27
ATOM 1264 C LEU 323 60.499 28.029 21.454 1.00 18.38
ATOM 1265 O LEU 323 60.275 28.008 22.663 1.00 18.81
ATOM 1266 N LEU 324 59.595 28.406 20.557 1.00 18.67
ATOM 1267 CA LEU 324 58.275 28.897 20.924 1.00 19.02
ATOM 1268 CB LEU 324 57.564 29.467 19.685 1.00 17.78
ATOM 1269 CG LEU 324 56.095 29.891 19.838 1.00 17.59
ATOM 1270 CD1 LEU 324 55.983 31.123 20.709 1.00 18.15
ATOM 1271 CD2 LEU 324 55.489 30.180 18.476 1.00 16.43
ATOM 1272 C LEU 324 57.354 27.884 21.610 1.00 19.62
ATOM 1273 O LEU 324 56.735 28.185 22.633 1.00 19.40

ATOM 1274 N MET 325 57.224 26.701 21.029 1.00 21.14
ATOM 1275 CA MET 325 56.330 25.680 21.585 1.00 24.06
ATOM 1276 CB MET 325 55.857 24.738 20.473 1.00 24.68
ATOM 1277 CG MET 325 55.169 25.444 19.303 1.00 24.49
ATOM 1278 SD MET 325 53.759 26.457 19.820 1.00 26.18
ATOM 1279 CE MET 325 52.609 25.252 20.373 1.00 24.03
ATOM 1280 C MET 325 56.996 24.887 22.705 1.00 26.15
ATOM 1281 O MET 325 57.021 23.664 22.693 1.00 25.68
ATOM 1282 N SER 326 57.555 25.593 23.671 1.00 29.34
ATOM 1283 CA SER 326 58.232 24.938 24.774 1.00 32.40
ATOM 1284 CB SER 326 59.512 25.701 25.112 1.00 32.12
ATOM 1285 OG SER 326 60.127 25.173 26.272 1.00 36.86
ATOM 1286 C SER 326 57.317 24.831 25.996 1.00 34.04
ATOM 1287 O SER 326 56.532 25.741 26.280 1.00 33.24
ATOM 1288 N THR 327 57.366 23.687 26.674 1.00 35.62
ATOM 1289 CA THR 327 56.560 23.486 27.867 1.00 36.88
ATOM 1290 CB THR 327 55.938 22.085 27.907 1.00 36.58
ATOM 1291 OG1 THR 327 56.953 21.094 27.714 1.00 38.58
ATOM 1292 CG2 THR 327 54.883 21.938 26.826 1.00 37.73
ATOM 1293 C THR 327 57.378 23.733 29.135 1.00 38.77
ATOM 1294 O THR 327 56.921 23.438 30.240 1.00 39.53
ATOM 1295 N ASP 328 58.593 24.260 28.972 1.00 41.25
ATOM 1296 CA ASP 328 59.473 24.573 30.099 1.00 43.20
ATOM 1297 CB ASP 328 60.940 24.698 29.655 1.00 46.47
ATOM 1298 CG ASP 328 61.618 23.346 29.439 1.00 51.94
ATOM 1299 OD1 ASP 328 62.547 23.278 28.601 1.00 55.43
ATOM 1300 OD2 ASP 328 61.251 22.354 30.111 1.00 54.77
ATOM 1301 C ASP 328 59.001 25.905 30.653 1.00 43.79
ATOM 1302 O ASP 328 59.755 26.877 30.709 1.00 45.91
ATOM 1303 N ARG 329 57.724 25.967 30.995 1.00 43.55
ATOM 1304 CA ARG 329 57.143 27.178 31.542 1.00 43.04
ATOM 1305 CB ARG 329 56.398 27.997 30.482 1.00 43.87
ATOM 1306 CG ARG 329 57.258 28.740 29.504 1.00 40.87
ATOM 1307 CD ARG 329 57.545 27.886 28.314 1.00 39.52
ATOM 1308 NE ARG 329 58.301 28.643 27.341 1.00 38.90
ATOM 1309 CZ ARG 329 59.624 28.708 27.313 1.00 40.59
ATOM 1310 NH1 ARG 329 60.359 28.052 28.196 1.00 42.41
ATOM 1311 NH2 ARG 329 60.210 29.466 26.413 1.00 41.87
ATOM 1312 C ARG 329 56.152 26.817 32.609 1.00 43.00
ATOM 1313 O ARG 329 55.600 25.716 32.628 1.00 43.66
ATOM 1314 N SER 330 55.886 27.797 33.456 1.00 41.58
ATOM 1315 CA SER 330 54.953 27.641 34.538 1.00 40.11
ATOM 1316 CB SER 330 55.491 28.362 35.777 1.00 40.38
ATOM 1317 C SER 330 53.602 28.223 34.103 1.00 38.99
ATOM 1318 O SER 330 53.553 29.172 33.320 1.00 39.22
ATOM 1319 N GLY 331 52.517 27.581 34.529 1.00 37.52
ATOM 1320 CA GLY 331 51.176 28.063 34.232 1.00 35.64

ATOM 1321 C GLY 331 50.493 27.782 32.906 1.00 35.14
ATOM 1322 O GLY 331 49.439 28.363 32.640 1.00 34.48
ATOM 1323 N LEU 332 51.059 26.925 32.066 1.00 34.54
ATOM 1324 CA LEU 332 50.424 26.637 30.780 1.00 34.59
ATOM 1325 CB LEU 332 51.394 25.942 29.828 1.00 33.09
ATOM 1326 CG LEU 332 52.532 26.765 29.236 1.00 32.72
ATOM 1327 CD1 LEU 332 53.473 25.834 28.497 1.00 30.29
ATOM 1328 CD2 LEU 332 51.987 27.844 28.313 1.00 29.20
ATOM 1329 C LEU 332 49.191 25.763 30.969 1.00 35.14
ATOM 1330 O LEU 332 49.178 24.874 31.811 1.00 35.96
ATOM 1331 N LEU 333 48.153 26.076 30.204 1.00 35.65
ATOM 1332 CA LEU 333 46.898 25.345 30.215 1.00 37.97
ATOM 1333 CB LEU 333 45.743 26.271 29.796 1.00 40.71
ATOM 1334 CG LEU 333 45.389 27.483 30.670 1.00 43.46
ATOM 1335 CD1 LEU 333 44.713 28.620 29.882 1.00 42.72
ATOM 1336 CD2 LEU 333 44.487 27.021 31.806 1.00 45.25
ATOM 1337 C LEU 333 46.952 24.115 29.300 1.00 37.78
ATOM 1338 O LEU 333 46.695 22.991 29.720 1.00 37.65
ATOM 1339 N CYA 334 47.361 24.323 28.060 1.00 38.65
ATOM 1340 CA CYA 334 47.413 23.249 27.073 1.00 40.91
ATOM 1341 CB CYA 334 46.936 23.788 25.721 1.00 47.35
ATOM 1342 SG CYA 334 45.406 24.693 25.867 1.00 52.24
ATOM 1343 AS CYA 334 44.066 22.890 25.562 1.00 70.72
ATOM 1344 C CYA 334 48.778 22.588 26.901 1.00 39.85
ATOM 1345 O CYA 334 49.287 22.473 25.775 1.00 39.54
ATOM 1346 N VAL 335 49.329 22.078 27.997 1.00 37.67
ATOM 1347 CA VAL 335 50.641 21.432 27.967 1.00 36.07
ATOM 1348 CB VAL 335 51.019 20.905 29.384 1.00 33.70
ATOM 1349 CG1 VAL 335 52.434 20.332 29.401 1.00 33.70
ATOM 1350 CG2 VAL 335 50.913 22.028 30.387 1.00 31.84
ATOM 1351 C VAL 335 50.734 20.334 26.885 1.00 36.09
ATOM 1352 O VAL 335 51.662 20.335 26.064 1.00 34.41
ATOM 1353 N ASP 336 49.747 19.444 26.833 1.00 35.95
ATOM 1354 CA ASP 336 49.748 18.372 25.844 1.00 36.34
ATOM 1355 CB ASP 336 48.591 17.394 26.091 1.00 41.36
ATOM 1356 CG ASP 336 48.613 16.206 25.129 1.00 46.23
ATOM 1357 OD1 ASP 336 47.615 16.021 24.392 1.00 49.55
ATOM 1358 OD2 ASP 336 49.639 15.470 25.097 1.00 48.07
ATOM 1359 C ASP 336 49.727 18.846 24.390 1.00 33.05
ATOM 1360 O ASP 336 50.527 18.377 23.573 1.00 32.33
ATOM 1361 N LYS 337 48.794 19.743 24.076 1.00 29.57
ATOM 1362 CA LYS 337 48.661 20.286 22.723 1.00 27.76
ATOM 1363 CB LYS 337 47.520 21.313 22.689 1.00 27.09
ATOM 1364 C LYS 337 49.988 20.941 22.286 1.00 27.64
ATOM 1365 O LYS 337 50.472 20.713 21.173 1.00 26.09
ATOM 1366 N ILE 338 50.597 21.688 23.208 1.00 25.90
ATOM 1367 CA ILE 338 51.852 22.394 22.971 1.00 24.21

```
ATOM  1368  CB  ILE  338      52.128  23.391  24.122  1.00 23.30
ATOM  1369  CG2 ILE  338      53.500  24.048  23.958  1.00 21.75
ATOM  1370  CG1 ILE  338      51.014  24.448  24.155  1.00 21.19
ATOM  1371  CD1 ILE  338      51.055  25.393  25.361  1.00 21.39
ATOM  1372  C   ILE  338      53.041  21.451  22.782  1.00 25.55
ATOM  1373  O   ILE  338      53.861  21.640  21.875  1.00 24.74
ATOM  1374  N   GLU  339      53.124  20.421  23.622  1.00 27.43
ATOM  1375  CA  GLU  339      54.220  19.448  23.536  1.00 27.60
ATOM  1376  CB  GLU  339      54.201  18.512  24.755  1.00 27.21
ATOM  1377  C   GLU  339      54.112  18.650  22.236  1.00 26.85
ATOM  1378  O   GLU  339      55.119  18.385  21.581  1.00 26.71
ATOM  1379  N   LYS  340      52.888  18.276  21.872  1.00 27.04
ATOM  1380  CA  LYS  340      52.663  17.515  20.654  1.00 28.19
ATOM  1381  CB  LYS  340      51.210  17.008  20.609  1.00 28.67
ATOM  1382  C   LYS  340      53.002  18.402  19.439  1.00 27.96
ATOM  1383  O   LYS  340      53.558  17.934  18.436  1.00 27.48
ATOM  1384  N   SER  341      52.746  19.700  19.567  1.00 28.32
ATOM  1385  CA  SER  341      53.058  20.662  18.514  1.00 28.02
ATOM  1386  CB  SER  341      52.457  22.022  18.867  1.00 31.25
ATOM  1387  OG  SER  341      52.880  23.029  17.965  1.00 37.69
ATOM  1388  C   SER  341      54.578  20.773  18.350  1.00 26.01
ATOM  1389  O   SER  341      55.096  20.717  17.234  1.00 25.06
ATOM  1390  N   GLN  342      55.297  20.899  19.462  1.00 25.71
ATOM  1391  CA  GLN  342      56.750  20.993  19.398  1.00 26.39
ATOM  1392  CB  GLN  342      57.356  21.254  20.777  1.00 24.17
ATOM  1393  CG  GLN  342      58.834  21.590  20.703  1.00 25.09
ATOM  1394  CD  GLN  342      59.476  21.677  22.057  1.00 26.93
ATOM  1395  OE1 GLN  342      59.479  20.704  22.810  1.00 27.77
ATOM  1396  NE2 GLN  342      60.022  22.839  22.386  1.00 24.61
ATOM  1397  C   GLN  342      57.354  19.715  18.806  1.00 25.69
ATOM  1398  O   GLN  342      58.356  19.771  18.075  1.00 24.99
ATOM  1399  N   GLU  343      56.753  18.569  19.127  1.00 25.00
ATOM  1400  CA  GLU  343      57.222  17.280  18.610  1.00 25.34
ATOM  1401  CB  GLU  343      56.411  16.118  19.245  1.00 25.90
ATOM  1402  C   GLU  343      57.089  17.276  17.076  1.00 24.32
ATOM  1403  O   GLU  343      58.021  16.891  16.365  1.00 23.99
ATOM  1404  N   ALA  344      55.961  17.789  16.587  1.00 23.56
ATOM  1405  CA  ALA  344      55.701  17.875  15.153  1.00 22.85
ATOM  1406  CB  ALA  344      54.320  18.451  14.917  1.00 22.64
ATOM  1407  C   ALA  344      56.768  18.743  14.489  1.00 22.77
ATOM  1408  O   ALA  344      57.355  18.360  13.477  1.00 22.08
ATOM  1409  N   TYR  345      57.057  19.893  15.092  1.00 21.89
ATOM  1410  CA  TYR  345      58.075  20.792  14.550  1.00 21.18
ATOM  1411  CB  TYR  345      58.108  22.119  15.313  1.00 20.27
ATOM  1412  CG  TYR  345      57.048  23.078  14.856  1.00 17.45
ATOM  1413  CD1 TYR  345      56.001  23.431  15.698  1.00 17.99
ATOM  1414  CE1 TYR  345      54.992  24.253  15.270  1.00 19.97
```

ATOM 1415 CD2 TYR 345 57.063 23.589 13.562 1.00 19.11
ATOM 1416 CE2 TYR 345 56.055 24.424 13.116 1.00 19.14
ATOM 1417 CZ TYR 345 55.017 24.749 13.972 1.00 20.78
ATOM 1418 OH TYR 345 53.983 25.539 13.530 1.00 20.70
ATOM 1419 C TYR 345 59.454 20.167 14.583 1.00 20.96
ATOM 1420 O TYR 345 60.221 20.314 13.632 1.00 22.29
ATOM 1421 N LEU 346 59.778 19.480 15.677 1.00 20.82
ATOM 1422 CA LEU 346 61.079 18.838 15.817 1.00 20.18
ATOM 1423 CB LEU 346 61.216 18.203 17.205 1.00 21.04
ATOM 1424 CG LEU 346 61.606 19.158 18.335 1.00 21.25
ATOM 1425 CD1 LEU 346 61.226 18.595 19.685 1.00 20.95
ATOM 1426 CD2 LEU 346 63.099 19.438 18.267 1.00 19.90
ATOM 1427 C LEU 346 61.317 17.806 14.716 1.00 20.19
ATOM 1428 O LEU 346 62.407 17.755 14.142 1.00 20.69
ATOM 1429 N LEU 347 60.290 17.016 14.390 1.00 22.00
ATOM 1430 CA LEU 347 60.406 15.994 13.344 1.00 21.81
ATOM 1431 CB LEU 347 59.199 15.051 13.366 1.00 24.03
ATOM 1432 CG LEU 347 59.301 13.805 14.250 1.00 26.28
ATOM 1433 CD1 LEU 347 57.964 13.072 14.277 1.00 27.79
ATOM 1434 CD2 LEU 347 60.409 12.889 13.728 1.00 24.78
ATOM 1435 C LEU 347 60.544 16.623 11.966 1.00 20.50
ATOM 1436 O LEU 347 61.351 16.179 11.143 1.00 21.39
ATOM 1437 N ALA 348 59.767 17.674 11.727 1.00 20.84
ATOM 1438 CA ALA 348 59.788 18.381 10.456 1.00 18.12
ATOM 1439 CB ALA 348 58.729 19.480 10.457 1.00 18.49
ATOM 1440 C ALA 348 61.168 18.963 10.269 1.00 17.53
ATOM 1441 O ALA 348 61.785 18.781 9.228 1.00 18.78
ATOM 1442 N PHE 349 61.677 19.569 11.338 1.00 19.55
ATOM 1443 CA PHE 349 63.001 20.196 11.389 1.00 19.84
ATOM 1444 CB PHE 349 63.188 20.823 12.786 1.00 18.68
ATOM 1445 CG PHE 349 64.380 21.758 12.917 1.00 19.12
ATOM 1446 CD1 PHE 349 65.234 22.008 11.851 1.00 19.95
ATOM 1447 CD2 PHE 349 64.618 22.420 14.126 1.00 20.06
ATOM 1448 CE1 PHE 349 66.294 22.905 11.971 1.00 18.99
ATOM 1449 CE2 PHE 349 65.674 23.317 14.261 1.00 16.79
ATOM 1450 CZ PHE 349 66.516 23.562 13.184 1.00 18.91
ATOM 1451 C PHE 349 64.108 19.170 11.103 1.00 20.44
ATOM 1452 O PHE 349 64.980 19.401 10.260 1.00 19.83
ATOM 1453 N GLU 350 64.064 18.032 11.794 1.00 23.59
ATOM 1454 CA GLU 350 65.077 16.995 11.610 1.00 23.46
ATOM 1455 CB GLU 350 64.830 15.845 12.584 1.00 25.26
ATOM 1456 CG GLU 350 65.694 14.644 12.288 1.00 31.98
ATOM 1457 CD GLU 350 65.526 13.482 13.257 1.00 35.49
ATOM 1458 OE1 GLU 350 66.560 12.853 13.555 1.00 40.26
ATOM 1459 OE2 GLU 350 64.380 13.173 13.689 1.00 36.23
ATOM 1460 C GLU 350 65.083 16.489 10.165 1.00 21.12
ATOM 1461 O GLU 350 66.133 16.384 9.526 1.00 19.81

ATOM 1462 N HIS 351 63.888 16.234 9.651 1.00 21.98
ATOM 1463 CA HIS 351 63.694 15.751 8.292 1.00 21.31
ATOM 1464 CB HIS 351 62.238 15.321 8.107 1.00 21.76
ATOM 1465 CG HIS 351 61.839 14.160 8.967 1.00 22.08
ATOM 1466 CD2 HIS 351 62.578 13.317 9.728 1.00 22.65
ATOM 1467 ND1 HIS 351 60.532 13.751 9.115 1.00 22.37
ATOM 1468 CE1 HIS 351 60.478 12.716 9.930 1.00 21.44
ATOM 1469 NE2 HIS 351 61.705 12.429 10.314 1.00 20.85
ATOM 1470 C HIS 351 64.117 16.815 7.275 1.00 21.18
ATOM 1471 O HIS 351 64.683 16.489 6.231 1.00 22.65
ATOM 1472 N TYR 352 63.915 18.088 7.602 1.00 19.79
ATOM 1473 CA TYR 352 64.327 19.146 6.697 1.00 18.72
ATOM 1474 CB TYR 352 63.768 20.502 7.122 1.00 19.55
ATOM 1475 CG TYR 352 64.140 21.580 6.137 1.00 19.27
ATOM 1476 CD1 TYR 352 63.556 21.623 4.867 1.00 19.29
ATOM 1477 CE1 TYR 352 63.961 22.555 3.927 1.00 17.55
ATOM 1478 CD2 TYR 352 65.132 22.507 6.438 1.00 18.91
ATOM 1479 CE2 TYR 352 65.545 23.443 5.503 1.00 17.30
ATOM 1480 CZ TYR 352 64.954 23.459 4.256 1.00 18.41
ATOM 1481 OH TYR 352 65.355 24.384 3.334 1.00 19.40
ATOM 1482 C TYR 352 65.849 19.182 6.687 1.00 19.31
ATOM 1483 O TYR 352 66.479 19.333 5.639 1.00 20.25
ATOM 1484 N VAL 353 66.446 19.017 7.858 1.00 21.25
ATOM 1485 CA VAL 353 67.899 18.993 7.960 1.00 22.03
ATOM 1486 CB VAL 353 68.348 18.880 9.450 1.00 22.60
ATOM 1487 CG1 VAL 353 69.843 18.635 9.550 1.00 20.34
ATOM 1488 CG2 VAL 353 67.997 20.167 10.183 1.00 22.61
ATOM 1489 C VAL 353 68.442 17.827 7.108 1.00 22.74
ATOM 1490 O VAL 353 69.448 17.985 6.398 1.00 23.44
ATOM 1491 N ASN 354 67.773 16.674 7.165 1.00 22.30
ATOM 1492 CA ASN 354 68.185 15.508 6.373 1.00 23.56
ATOM 1493 CB ASN 354 67.241 14.320 6.603 1.00 22.26
ATOM 1494 CG ASN 354 67.374 13.715 7.981 1.00 23.06
ATOM 1495 OD1 ASN 354 68.406 13.843 8.628 1.00 25.79
ATOM 1496 ND2 ASN 354 66.327 13.044 8.435 1.00 21.07
ATOM 1497 C ASN 354 68.134 15.877 4.888 1.00 25.10
ATOM 1498 O ASN 354 69.024 15.534 4.111 1.00 26.70
ATOM 1499 N HIS 355 67.067 16.568 4.503 1.00 24.50
ATOM 1500 CA HIS 355 66.881 16.986 3.123 1.00 24.46
ATOM 1501 CB HIS 355 65.557 17.750 2.969 1.00 26.07
ATOM 1502 CG HIS 355 65.365 18.337 1.604 1.00 28.28
ATOM 1503 CD2 HIS 355 65.918 19.422 1.018 1.00 28.10
ATOM 1504 ND1 HIS 355 64.600 17.724 0.632 1.00 26.32
ATOM 1505 CE1 HIS 355 64.706 18.407 -0.499 1.00 27.71
ATOM 1506 NE2 HIS 355 65.502 19.435 -0.288 1.00 27.79
ATOM 1507 C HIS 355 68.022 17.857 2.624 1.00 24.07
ATOM 1508 O HIS 355 68.460 17.729 1.484 1.00 23.54

ATOM 1509 N ARG 356 68.463 18.774 3.471 1.00 25.31
ATOM 1510 CA ARG 356 69.523 19.714 3.130 1.00 25.69
ATOM 1511 CB ARG 356 69.561 20.820 4.168 1.00 24.06
ATOM 1512 CG ARG 356 68.337 21.682 4.094 1.00 23.23
ATOM 1513 CD ARG 356 68.670 22.973 3.424 1.00 25.91
ATOM 1514 NE ARG 356 69.447 23.814 4.322 1.00 24.87
ATOM 1515 CZ ARG 356 70.325 24.726 3.928 1.00 25.05
ATOM 1516 NH1 ARG 356 70.546 24.920 2.640 1.00 24.97
ATOM 1517 NH2 ARG 356 70.978 25.453 4.831 1.00 25.62
ATOM 1518 C ARG 356 70.900 19.109 2.949 1.00 27.73
ATOM 1519 O ARG 356 71.724 19.645 2.208 1.00 28.38
ATOM 1520 N LYS 357 71.179 18.048 3.693 1.00 29.45
ATOM 1521 CA LYS 357 72.457 17.355 3.588 1.00 31.35
ATOM 1522 CB LYS 357 72.503 16.566 2.270 1.00 32.80
ATOM 1523 CG LYS 357 71.290 15.650 2.103 1.00 35.78
ATOM 1524 CD LYS 357 71.264 14.927 0.778 1.00 39.43
ATOM 1525 CE LYS 357 70.121 13.918 0.739 1.00 42.93
ATOM 1526 NZ LYS 357 70.162 13.074 -0.498 1.00 45.97
ATOM 1527 C LYS 357 73.692 18.247 3.743 1.00 31.34
ATOM 1528 O LYS 357 74.489 18.390 2.818 1.00 32.65
ATOM 1529 N HIS 358 73.837 18.861 4.913 1.00 30.72
ATOM 1530 CA HIS 358 74.995 19.706 5.186 1.00 31.49
ATOM 1531 CB HIS 358 74.895 20.322 6.579 1.00 29.13
ATOM 1532 CG HIS 358 73.882 21.415 6.688 1.00 25.30
ATOM 1533 CD2 HIS 358 74.026 22.760 6.646 1.00 24.90
ATOM 1534 ND1 HIS 358 72.543 21.175 6.892 1.00 24.54
ATOM 1535 CE1 HIS 358 71.901 22.324 6.975 1.00 23.68
ATOM 1536 NE2 HIS 358 72.777 23.302 6.830 1.00 25.28
ATOM 1537 C HIS 358 76.235 18.831 5.161 1.00 33.38
ATOM 1538 O HIS 358 76.166 17.647 5.495 1.00 35.46
ATOM 1539 N ASN 359 77.366 19.399 4.768 1.00 35.34
ATOM 1540 CA ASN 359 78.606 18.636 4.746 1.00 38.17
ATOM 1541 CB ASN 359 79.544 19.150 3.646 1.00 37.84
ATOM 1542 C ASN 359 79.236 18.825 6.120 1.00 39.85
ATOM 1543 O ASN 359 80.317 19.406 6.240 1.00 42.72
ATOM 1544 N ILE 360 78.510 18.411 7.159 1.00 39.01
ATOM 1545 CA ILE 360 78.968 18.526 8.549 1.00 36.72
ATOM 1546 CB ILE 360 78.351 19.752 9.264 1.00 37.69
ATOM 1547 CG2 ILE 360 78.802 19.793 10.722 1.00 37.56
ATOM 1548 CG1 ILE 360 78.735 21.049 8.549 1.00 37.68
ATOM 1549 CD1 ILE 360 77.970 22.253 9.041 1.00 38.40
ATOM 1550 C ILE 360 78.524 17.278 9.303 1.00 35.15
ATOM 1551 O ILE 360 77.343 16.931 9.314 1.00 33.75
ATOM 1552 N PRO 361 79.475 16.564 9.912 1.00 34.64
ATOM 1553 CD PRO 361 80.930 16.785 9.873 1.00 35.59
ATOM 1554 CA PRO 361 79.138 15.349 10.660 1.00 33.92
ATOM 1555 CB PRO 361 80.513 14.768 11.014 1.00 35.27

ATOM 1556 CG PRO 361 81.412 15.972 11.048 1.00 35.97
ATOM 1557 C PRO 361 78.292 15.618 11.909 1.00 30.95
ATOM 1558 O PRO 361 78.555 16.554 12.653 1.00 31.50
ATOM 1559 N HIS 362 77.269 14.793 12.112 1.00 28.75
ATOM 1560 CA HIS 362 76.378 14.900 13.263 1.00 30.25
ATOM 1561 CB HIS 362 77.152 14.612 14.548 1.00 31.20
ATOM 1562 CG HIS 362 78.075 13.441 14.440 1.00 33.72
ATOM 1563 CD2 HIS 362 77.826 12.122 14.275 1.00 34.55
ATOM 1564 ND1 HIS 362 79.449 13.569 14.469 1.00 35.55
ATOM 1565 CE1 HIS 362 80.006 12.377 14.322 1.00 35.28
ATOM 1566 NE2 HIS 362 79.040 11.484 14.204 1.00 37.61
ATOM 1567 C HIS 362 75.742 16.275 13.368 1.00 29.44
ATOM 1568 O HIS 362 75.521 16.769 14.472 1.00 29.93
ATOM 1569 N PHE 363 75.397 16.856 12.222 1.00 29.22
ATOM 1570 CA PHE 363 74.803 18.188 12.160 1.00 27.72
ATOM 1571 CB PHE 363 74.446 18.538 10.709 1.00 26.85
ATOM 1572 CG PHE 363 73.901 19.931 10.532 1.00 27.48
ATOM 1573 CD1 PHE 363 74.758 21.017 10.391 1.00 27.76
ATOM 1574 CD2 PHE 363 72.523 20.157 10.513 1.00 27.45
ATOM 1575 CE1 PHE 363 74.244 22.313 10.234 1.00 28.56
ATOM 1576 CE2 PHE 363 72.001 21.446 10.357 1.00 25.15
ATOM 1577 CZ PHE 363 72.860 22.521 10.219 1.00 24.41
ATOM 1578 C PHE 363 73.597 18.385 13.075 1.00 27.45
ATOM 1579 O PHE 363 73.577 19.324 13.880 1.00 27.73
ATOM 1580 N TRP 364 72.616 17.489 12.983 1.00 25.89
ATOM 1581 CA TRP 364 71.401 17.592 13.800 1.00 25.85
ATOM 1582 CB TRP 364 70.444 16.426 13.506 1.00 24.27
ATOM 1583 CG TRP 364 69.168 16.391 14.328 1.00 23.75
ATOM 1584 CD2 TRP 364 68.152 17.407 14.397 1.00 24.87
ATOM 1585 CE2 TRP 364 67.140 16.922 15.261 1.00 24.81
ATOM 1586 CE3 TRP 364 67.989 18.674 13.820 1.00 25.47
ATOM 1587 CD1 TRP 364 68.745 15.370 15.122 1.00 22.98
ATOM 1588 NE1 TRP 364 67.530 15.679 15.684 1.00 25.99
ATOM 1589 CZ2 TRP 364 65.987 17.661 15.560 1.00 25.14
ATOM 1590 CZ3 TRP 364 66.844 19.405 14.116 1.00 25.29
ATOM 1591 CH2 TRP 364 65.857 18.894 14.982 1.00 24.53
ATOM 1592 C TRP 364 71.659 17.747 15.308 1.00 26.94
ATOM 1593 O TRP 364 71.202 18.721 15.904 1.00 27.16
ATOM 1594 N PRO 365 72.382 16.796 15.944 1.00 27.60
ATOM 1595 CD PRO 365 72.912 15.522 15.411 1.00 27.55
ATOM 1596 CA PRO 365 72.655 16.915 17.387 1.00 25.90
ATOM 1597 CB PRO 365 73.565 15.717 17.668 1.00 26.00
ATOM 1598 CG PRO 365 73.136 14.705 16.658 1.00 28.32
ATOM 1599 C PRO 365 73.374 18.225 17.714 1.00 23.89
ATOM 1600 O PRO 365 73.088 18.861 18.725 1.00 23.81
ATOM 1601 N LYS 366 74.297 18.626 16.845 1.00 24.24
ATOM 1602 CA LYS 366 75.058 19.862 17.027 1.00 26.24

ATOM 1603 CB LYS 366 76.144 19.982 15.963 1.00 27.44
ATOM 1604 CG LYS 366 77.310 19.022 16.138 1.00 28.76
ATOM 1605 CD LYS 366 78.254 19.171 14.975 1.00 30.53
ATOM 1606 CE LYS 366 79.527 18.387 15.167 1.00 34.25
ATOM 1607 NZ LYS 366 80.388 18.463 13.947 1.00 37.89
ATOM 1608 C LYS 366 74.181 21.107 16.993 1.00 26.73
ATOM 1609 O LYS 366 74.385 22.042 17.762 1.00 27.36
ATOM 1610 N LEU 367 73.216 21.124 16.086 1.00 27.98
ATOM 1611 CA LEU 367 72.308 22.256 15.967 1.00 27.87
ATOM 1612 CB LEU 367 71.559 22.192 14.632 1.00 27.29
ATOM 1613 CG LEU 367 70.613 23.356 14.318 1.00 27.25
ATOM 1614 CD1 LEU 367 71.334 24.707 14.510 1.00 22.90
ATOM 1615 CD2 LEU 367 70.081 23.189 12.896 1.00 24.54
ATOM 1616 C LEU 367 71.327 22.223 17.134 1.00 29.38
ATOM 1617 O LEU 367 70.993 23.249 17.716 1.00 31.09
ATOM 1618 N LEU 368 70.889 21.026 17.491 1.00 30.38
ATOM 1619 CA LEU 368 69.962 20.843 18.594 1.00 31.14
ATOM 1620 CB LEU 368 69.659 19.353 18.731 1.00 32.20
ATOM 1621 CG LEU 368 68.247 18.852 19.014 1.00 33.52
ATOM 1622 CD1 LEU 368 67.184 19.651 18.267 1.00 31.14
ATOM 1623 CD2 LEU 368 68.210 17.379 18.632 1.00 33.99
ATOM 1624 C LEU 368 70.601 21.395 19.876 1.00 32.36
ATOM 1625 O LEU 368 69.917 21.963 20.730 1.00 32.58
ATOM 1626 N MET 369 71.922 21.272 19.985 1.00 33.30
ATOM 1627 CA MET 369 72.641 21.771 21.149 1.00 34.04
ATOM 1628 CB MET 369 74.051 21.190 21.209 1.00 35.31
ATOM 1629 CG MET 369 74.108 19.858 21.935 1.00 36.83
ATOM 1630 SD MET 369 75.312 18.728 21.235 1.00 43.07
ATOM 1631 CE MET 369 76.862 19.636 21.472 1.00 41.31
ATOM 1632 C MET 369 72.675 23.297 21.212 1.00 34.30
ATOM 1633 O MET 369 72.961 23.876 22.269 1.00 35.82
ATOM 1634 N LYS 370 72.368 23.949 20.091 1.00 32.14
ATOM 1635 CA LYS 370 72.325 25.405 20.044 1.00 29.17
ATOM 1636 CB LYS 370 72.394 25.904 18.608 1.00 28.18
ATOM 1637 CG LYS 370 73.662 25.518 17.900 1.00 27.72
ATOM 1638 CD LYS 370 74.866 25.969 18.679 1.00 28.10
ATOM 1639 CE LYS 370 76.127 25.650 17.930 1.00 27.79
ATOM 1640 NZ LYS 370 77.298 25.941 18.777 1.00 30.78
ATOM 1641 C LYS 370 71.033 25.875 20.705 1.00 29.27
ATOM 1642 O LYS 370 70.950 26.999 21.200 1.00 29.43
ATOM 1643 N VAL 371 70.018 25.014 20.714 1.00 29.40
ATOM 1644 CA VAL 371 68.756 25.358 21.358 1.00 29.90
ATOM 1645 CB VAL 371 67.687 24.237 21.218 1.00 28.75
ATOM 1646 CG1 VAL 371 66.463 24.561 22.064 1.00 27.12
ATOM 1647 CG2 VAL 371 67.275 24.080 19.762 1.00 29.23
ATOM 1648 C VAL 371 69.075 25.573 22.832 1.00 31.39
ATOM 1649 O VAL 371 68.543 26.481 23.462 1.00 31.20

```
ATOM   1650  N   THR   372      69.971  24.743  23.366  1.00 31.39
ATOM   1651  CA  THR   372      70.371  24.847  24.762  1.00 31.10
ATOM   1652  CB  THR   372      71.282  23.664  25.170  1.00 31.59
ATOM   1653  OG1 THR   372      70.554  22.441  25.008  1.00 30.60
ATOM   1654  CG2 THR   372      71.720  23.795  26.625  1.00 30.14
ATOM   1655  C   THR   372      71.071  26.186  24.994  1.00 30.76
ATOM   1656  O   THR   372      70.711  26.935  25.910  1.00 31.45
ATOM   1657  N   ASP   373      72.038  26.507  24.138  1.00 29.31
ATOM   1658  CA  ASP   373      72.744  27.772  24.252  1.00 27.32
ATOM   1659  CB  ASP   373      73.745  27.934  23.115  1.00 27.98
ATOM   1660  CG  ASP   373      74.886  26.933  23.190  1.00 28.94
ATOM   1661  OD1 ASP   373      75.043  26.259  24.225  1.00 31.01
ATOM   1662  OD2 ASP   373      75.639  26.825  22.205  1.00 31.38
ATOM   1663  C   ASP   373      71.742  28.926  24.247  1.00 26.50
ATOM   1664  O   ASP   373      71.872  29.861  25.040  1.00 27.35
ATOM   1665  N   LEU   374      70.711  28.826  23.412  1.00 24.17
ATOM   1666  CA  LEU   374      69.688  29.864  23.331  1.00 23.38
ATOM   1667  CB  LEU   374      68.795  29.660  22.107  1.00 22.98
ATOM   1668  CG  LEU   374      69.361  30.183  20.786  1.00 24.45
ATOM   1669  CD1 LEU   374      68.668  29.520  19.589  1.00 24.72
ATOM   1670  CD2 LEU   374      69.223  31.704  20.735  1.00 22.40
ATOM   1671  C   LEU   374      68.839  29.964  24.589  1.00 24.31
ATOM   1672  O   LEU   374      68.442  31.065  24.986  1.00 23.31
ATOM   1673  N   ARG   375      68.543  28.826  25.211  1.00 25.32
ATOM   1674  CA  ARG   375      67.748  28.821  26.438  1.00 27.76
ATOM   1675  CB  ARG   375      67.455  27.392  26.908  1.00 30.82
ATOM   1676  CG  ARG   375      66.901  26.439  25.854  1.00 38.79
ATOM   1677  CD  ARG   375      65.424  26.630  25.582  1.00 45.40
ATOM   1678  NE  ARG   375      64.709  25.360  25.620  1.00 52.61
ATOM   1679  CZ  ARG   375      63.800  24.967  24.726  1.00 56.89
ATOM   1680  NH1 ARG   375      63.473  25.732  23.694  1.00 58.27
ATOM   1681  NH2 ARG   375      63.201  23.793  24.855  1.00 58.46
ATOM   1682  C   ARG   375      68.563  29.542  27.512  1.00 26.98
ATOM   1683  O   ARG   375      68.025  30.336  28.282  1.00 26.18
ATOM   1684  N   MET   376      69.862  29.255  27.551  1.00 26.80
ATOM   1685  CA  MET   376      70.767  29.867  28.511  1.00 29.22
ATOM   1686  CB  MET   376      72.172  29.270  28.379  1.00 33.70
ATOM   1687  CG  MET   376      72.595  28.371  29.562  1.00 43.20
ATOM   1688  SD  MET   376      73.320  29.260  31.011  1.00 52.38
ATOM   1689  CE  MET   376      71.843  29.854  31.913  1.00 48.11
ATOM   1690  C   MET   376      70.804  31.384  28.339  1.00 27.54
ATOM   1691  O   MET   376      70.792  32.126  29.323  1.00 26.96
ATOM   1692  N   ILE   377      70.841  31.835  27.087  1.00 25.39
ATOM   1693  CA  ILE   377      70.847  33.264  26.767  1.00 23.26
ATOM   1694  CB  ILE   377      70.992  33.488  25.222  1.00 22.73
ATOM   1695  CG2 ILE   377      70.560  34.909  24.819  1.00 21.81
ATOM   1696  CG1 ILE   377      72.431  33.205  24.789  1.00 20.39
```

ATOM 1697 CD1 ILE 377 72.644 33.148 23.300 1.00 18.85
ATOM 1698 C ILE 377 69.558 33.900 27.309 1.00 22.91
ATOM 1699 O ILE 377 69.597 34.925 27.989 1.00 22.02
ATOM 1700 N GLY 378 68.427 33.244 27.069 1.00 22.29
ATOM 1701 CA GLY 378 67.161 33.757 27.547 1.00 22.83
ATOM 1702 C GLY 378 67.111 33.815 29.063 1.00 25.60
ATOM 1703 O GLY 378 66.546 34.752 29.630 1.00 26.25
ATOM 1704 N ALA 379 67.691 32.804 29.713 1.00 26.88
ATOM 1705 CA ALA 379 67.744 32.707 31.175 1.00 27.19
ATOM 1706 CB ALA 379 68.322 31.358 31.590 1.00 26.97
ATOM 1707 C ALA 379 68.606 33.827 31.738 1.00 26.13
ATOM 1708 O ALA 379 68.174 34.580 32.601 1.00 26.46
ATOM 1709 N CYA 380 69.826 33.935 31.230 1.00 27.61
ATOM 1710 CA CYA 380 70.742 34.973 31.667 1.00 29.74
ATOM 1711 CB CYA 380 72.070 34.865 30.923 1.00 35.44
ATOM 1712 SG CYA 380 73.081 33.458 31.417 1.00 42.61
ATOM 1713 AS CYA 380 74.829 33.691 29.945 1.00 55.91
ATOM 1714 C CYA 380 70.142 36.349 31.446 1.00 29.07
ATOM 1715 O CYA 380 70.243 37.225 32.303 1.00 29.46
ATOM 1716 N HIS 381 69.494 36.538 30.304 1.00 28.29
ATOM 1717 CA HIS 381 68.885 37.824 30.002 1.00 26.84
ATOM 1718 CB HIS 381 68.384 37.880 28.557 1.00 23.13
ATOM 1719 CG HIS 381 67.597 39.113 28.259 1.00 19.84
ATOM 1720 CD2 HIS 381 67.993 40.365 27.931 1.00 18.68
ATOM 1721 ND1 HIS 381 66.229 39.169 28.403 1.00 19.47
ATOM 1722 CE1 HIS 381 65.817 40.407 28.190 1.00 18.64
ATOM 1723 NE2 HIS 381 66.868 41.149 27.900 1.00 18.29
ATOM 1724 C HIS 381 67.747 38.157 30.967 1.00 26.78
ATOM 1725 O HIS 381 67.560 39.314 31.337 1.00 26.39
ATOM 1726 N ALA 382 66.964 37.158 31.347 1.00 27.78
ATOM 1727 CA ALA 382 65.867 37.395 32.269 1.00 29.45
ATOM 1728 CB ALA 382 65.077 36.125 32.471 1.00 29.51
ATOM 1729 C ALA 382 66.425 37.904 33.604 1.00 31.74
ATOM 1730 O ALA 382 65.932 38.882 34.159 1.00 32.60
ATOM 1731 N SER 383 67.483 37.262 34.093 1.00 33.02
ATOM 1732 CA SER 383 68.109 37.662 35.350 1.00 34.69
ATOM 1733 CB SER 383 69.212 36.677 35.733 1.00 36.18
ATOM 1734 OG SER 383 68.663 35.386 35.933 1.00 40.61
ATOM 1735 C SER 383 68.689 39.064 35.242 1.00 33.49
ATOM 1736 O SER 383 68.526 39.889 36.146 1.00 34.28
ATOM 1737 N ARG 384 69.377 39.332 34.141 1.00 32.60
ATOM 1738 CA ARG 384 69.955 40.642 33.938 1.00 32.60
ATOM 1739 CB ARG 384 70.926 40.638 32.762 1.00 33.60
ATOM 1740 CG ARG 384 71.429 42.013 32.409 1.00 36.33
ATOM 1741 CD ARG 384 72.875 41.975 31.993 1.00 39.62
ATOM 1742 NE ARG 384 73.760 42.260 33.114 1.00 41.76
ATOM 1743 CZ ARG 384 74.587 43.301 33.179 1.00 41.92

```
ATOM  1744  NH1 ARG  384      74.670  44.182  32.191  1.00 40.66
ATOM  1745  NH2 ARG  384      75.319  43.471  34.260  1.00 44.88
ATOM  1746  C   ARG  384      68.862  41.694  33.758  1.00 32.28
ATOM  1747  O   ARG  384      69.014  42.831  34.213  1.00 33.27
ATOM  1748  N   PHE  385      67.739  41.311  33.159  1.00 29.13
ATOM  1749  CA  PHE  385      66.663  42.259  32.977  1.00 27.55
ATOM  1750  CB  PHE  385      65.552  41.687  32.105  1.00 26.89
ATOM  1751  CG  PHE  385      64.415  42.641  31.888  1.00 25.11
ATOM  1752  CD1 PHE  385      64.495  43.630  30.918  1.00 24.94
ATOM  1753  CD2 PHE  385      63.281  42.580  32.689  1.00 25.01
ATOM  1754  CE1 PHE  385      63.466  44.547  30.753  1.00 25.50
ATOM  1755  CE2 PHE  385      62.244  43.495  32.531  1.00 24.06
ATOM  1756  CZ  PHE  385      62.338  44.482  31.563  1.00 25.44
ATOM  1757  C   PHE  385      66.125  42.641  34.348  1.00 29.08
ATOM  1758  O   PHE  385      65.887  43.816  34.613  1.00 27.90
ATOM  1759  N   LEU  386      65.972  41.658  35.231  1.00 31.19
ATOM  1760  CA  LEU  386      65.465  41.929  36.577  1.00 33.22
ATOM  1761  CB  LEU  386      65.355  40.640  37.397  1.00 34.35
ATOM  1762  C   LEU  386      66.362  42.940  37.279  1.00 33.52
ATOM  1763  O   LEU  386      65.874  43.907  37.855  1.00 32.93
ATOM  1764  N   HIS  387      67.673  42.760  37.158  1.00 34.80
ATOM  1765  CA  HIS  387      68.628  43.674  37.775  1.00 37.88
ATOM  1766  CB  HIS  387      70.042  43.112  37.705  1.00 36.66
ATOM  1767  CG  HIS  387      70.206  41.832  38.456  1.00 39.14
ATOM  1768  CD2 HIS  387      69.307  41.080  39.144  1.00 39.28
ATOM  1769  ND1 HIS  387      71.408  41.161  38.543  1.00 40.97
ATOM  1770  CE1 HIS  387      71.241  40.055  39.245  1.00 41.57
ATOM  1771  NE2 HIS  387      69.980  39.984  39.618  1.00 41.45
ATOM  1772  C   HIS  387      68.589  45.071  37.164  1.00 40.38
ATOM  1773  O   HIS  387      68.673  46.054  37.888  1.00 40.87
ATOM  1774  N   MET  388      68.466  45.161  35.842  1.00 43.32
ATOM  1775  CA  MET  388      68.398  46.455  35.168  1.00 46.28
ATOM  1776  CB  MET  388      68.170  46.286  33.665  1.00 43.30
ATOM  1777  CG  MET  388      69.342  45.738  32.875  1.00 43.55
ATOM  1778  SD  MET  388      69.034  45.896  31.098  1.00 46.27
ATOM  1779  CE  MET  388      68.208  44.370  30.709  1.00 42.36
ATOM  1780  C   MET  388      67.256  47.289  35.737  1.00 50.25
ATOM  1781  O   MET  388      67.363  48.506  35.886  1.00 49.79
ATOM  1782  N   LYS  389      66.163  46.610  36.075  1.00 52.74      ALTA
ATOM  1783  CA  LYS  389      64.983  47.274  36.633  1.00 56.15      ALTA
ATOM  1784  CB  LYS  389      63.770  46.334  36.565  1.00 56.87      ALTA
ATOM  1785  CG  LYS  389      63.227  46.087  35.161  1.00 57.76      ALTA
ATOM  1786  CD  LYS  389      62.029  45.156  35.212  1.00 55.98      ALTA
ATOM  1787  CE  LYS  389      62.426  43.796  35.778  1.00 55.48      ALTA
ATOM  1788  NZ  LYS  389      61.267  43.040  36.311  1.00 55.55      ALTA
ATOM  1789  C   LYS  389      65.177  47.767  38.064  1.00 56.69      ALTA
ATOM  1790  O   LYS  389      64.623  48.814  38.453  1.00 58.54      ALTA
```

ATOM 1791 N VAL 390 65.955 47.038 38.839 1.00 55.21
ATOM 1792 CA VAL 390 66.225 47.386 40.236 1.00 51.78
ATOM 1793 CB VAL 390 66.999 46.231 40.985 1.00 50.07
ATOM 1794 CG1 VAL 390 67.648 46.726 42.263 1.00 49.74
ATOM 1795 CG2 VAL 390 66.037 45.093 41.317 1.00 49.06
ATOM 1796 C VAL 390 67.053 48.681 40.227 1.00 49.38
ATOM 1797 O VAL 390 66.785 49.605 40.992 1.00 48.71
ATOM 1798 N GLU 391 67.974 48.778 39.272 1.00 46.71
ATOM 1799 CA GLU 391 68.866 49.919 39.142 1.00 44.88
ATOM 1800 CB GLU 391 70.156 49.488 38.438 1.00 45.24
ATOM 1801 CG GLU 391 70.793 48.207 38.997 1.00 47.65
ATOM 1802 CD GLU 391 71.461 48.388 40.358 1.00 50.29
ATOM 1803 OE1 GLU 391 71.141 49.373 41.063 1.00 50.68
ATOM 1804 OE2 GLU 391 72.310 47.535 40.718 1.00 50.85
ATOM 1805 C GLU 391 68.324 51.174 38.458 1.00 45.28
ATOM 1806 O GLU 391 68.568 52.286 38.940 1.00 46.46
ATOM 1807 N CYA 392 67.568 51.024 37.372 1.00 43.33
ATOM 1808 CA CYA 392 67.071 52.192 36.643 1.00 42.28
ATOM 1809 CB CYA 392 67.519 52.096 35.197 1.00 42.45
ATOM 1810 SG CYA 392 69.280 52.182 35.127 1.00 43.69
ATOM 1811 AS CYA 392 69.908 51.044 33.336 1.00 48.17
ATOM 1812 C CYA 392 65.589 52.493 36.709 1.00 42.51
ATOM 1813 O CYA 392 64.792 51.634 37.070 1.00 43.30
ATOM 1814 N PRO 393 65.205 53.752 36.418 1.00 42.13
ATOM 1815 CD PRO 393 66.109 54.899 36.199 1.00 40.54
ATOM 1816 CA PRO 393 63.794 54.182 36.441 1.00 42.26
ATOM 1817 CB PRO 393 63.896 55.710 36.365 1.00 41.47
ATOM 1818 CG PRO 393 65.189 55.938 35.614 1.00 41.10
ATOM 1819 C PRO 393 62.954 53.606 35.281 1.00 43.20
ATOM 1820 O PRO 393 63.463 53.452 34.163 1.00 42.61
ATOM 1821 N THR 394 61.686 53.305 35.559 1.00 43.70
ATOM 1822 CA THR 394 60.764 52.755 34.564 1.00 45.50
ATOM 1823 CB THR 394 59.340 52.609 35.129 1.00 47.20
ATOM 1824 OG1 THR 394 59.304 53.139 36.464 1.00 50.57
ATOM 1825 CG2 THR 394 58.878 51.150 35.137 1.00 47.99
ATOM 1826 C THR 394 60.682 53.583 33.283 1.00 44.58
ATOM 1827 O THR 394 60.409 53.054 32.215 1.00 46.36
ATOM 1828 N GLU 395 60.899 54.888 33.396 1.00 42.88
ATOM 1829 CA GLU 395 60.842 55.790 32.246 1.00 40.54
ATOM 1830 CB GLU 395 61.096 57.234 32.699 1.00 40.69
ATOM 1831 C GLU 395 61.799 55.421 31.098 1.00 38.51
ATOM 1832 O GLU 395 61.628 55.877 29.968 1.00 39.41
ATOM 1833 N LEU 396 62.828 54.640 31.402 1.00 35.60
ATOM 1834 CA LEU 396 63.795 54.220 30.386 1.00 33.11
ATOM 1835 CB LEU 396 65.169 54.003 31.027 1.00 33.60
ATOM 1836 CG LEU 396 65.831 55.230 31.660 1.00 34.54
ATOM 1837 CD1 LEU 396 67.160 54.835 32.282 1.00 32.83

```
ATOM   1838  CD2 LEU   396      66.026  56.308  30.599  1.00 35.71
ATOM   1839  C   LEU   396      63.388  52.940  29.660  1.00 30.95
ATOM   1840  O   LEU   396      63.950  52.605  28.624  1.00 30.90
ATOM   1841  N   PHE   397      62.422  52.227  30.223  1.00 30.18
ATOM   1842  CA  PHE   397      61.961  50.970  29.654  1.00 28.80
ATOM   1843  CB  PHE   397      61.712  49.946  30.777  1.00 28.10
ATOM   1844  CG  PHE   397      62.938  49.604  31.592  1.00 28.96
ATOM   1845  CD1 PHE   397      63.403  50.472  32.591  1.00 28.39
ATOM   1846  CD2 PHE   397      63.636  48.422  31.359  1.00 26.28
ATOM   1847  CE1 PHE   397      64.546  50.166  33.337  1.00 28.44
ATOM   1848  CE2 PHE   397      64.784  48.107  32.103  1.00 29.21
ATOM   1849  CZ  PHE   397      65.240  48.984  33.096  1.00 27.37
ATOM   1850  C   PHE   397      60.683  51.093  28.836  1.00 27.54
ATOM   1851  O   PHE   397      59.630  51.431  29.370  1.00 26.96
ATOM   1852  N   PRO   398      60.753  50.836  27.501  1.00 27.41
ATOM   1853  CD  PRO   398      61.968  50.600  26.686  1.00 25.42
ATOM   1854  CA  PRO   398      59.560  50.920  26.654  1.00 25.90
ATOM   1855  CB  PRO   398      60.068  50.383  25.320  1.00 25.26
ATOM   1856  CG  PRO   398      61.490  50.893  25.290  1.00 23.99
ATOM   1857  C   PRO   398      58.494  49.995  27.272  1.00 25.86
ATOM   1858  O   PRO   398      58.839  48.962  27.843  1.00 25.82
ATOM   1859  N   PRO   399      57.197  50.355  27.175  1.00 25.52
ATOM   1860  CD  PRO   399      56.627  51.576  26.578  1.00 25.49
ATOM   1861  CA  PRO   399      56.145  49.510  27.754  1.00 25.42
ATOM   1862  CB  PRO   399      54.861  50.181  27.273  1.00 26.23
ATOM   1863  CG  PRO   399      55.237  51.609  27.156  1.00 25.25
ATOM   1864  C   PRO   399      56.198  48.043  27.317  1.00 26.08
ATOM   1865  O   PRO   399      56.132  47.131  28.159  1.00 25.45
ATOM   1866  N   LEU   400      56.350  47.810  26.019  1.00 25.57
ATOM   1867  CA  LEU   400      56.406  46.440  25.509  1.00 26.27
ATOM   1868  CB  LEU   400      56.404  46.418  23.980  1.00 25.03
ATOM   1869  CG  LEU   400      56.117  45.042  23.363  1.00 24.51
ATOM   1870  CD1 LEU   400      54.757  44.530  23.806  1.00 23.22
ATOM   1871  CD2 LEU   400      56.173  45.149  21.862  1.00 23.70
ATOM   1872  C   LEU   400      57.602  45.657  26.067  1.00 27.06
ATOM   1873  O   LEU   400      57.484  44.465  26.363  1.00 27.41
ATOM   1874  N   PHE   401      58.736  46.339  26.231  1.00 27.16
ATOM   1875  CA  PHE   401      59.966  45.754  26.779  1.00 27.06
ATOM   1876  CB  PHE   401      61.047  46.833  26.802  1.00 26.60
ATOM   1877  CG  PHE   401      62.408  46.351  27.217  1.00 28.08
ATOM   1878  CD1 PHE   401      62.918  45.138  26.747  1.00 27.45
ATOM   1879  CD2 PHE   401      63.223  47.165  28.013  1.00 27.48
ATOM   1880  CE1 PHE   401      64.220  44.746  27.055  1.00 26.95
ATOM   1881  CE2 PHE   401      64.523  46.786  28.327  1.00 27.97
ATOM   1882  CZ  PHE   401      65.028  45.575  27.846  1.00 28.46
ATOM   1883  C   PHE   401      59.690  45.247  28.205  1.00 27.62
ATOM   1884  O   PHE   401      60.046  44.125  28.570  1.00 26.24
```

```
ATOM   1885  N   LEU   402      59.036  46.082  29.002  1.00 28.75
ATOM   1886  CA  LEU   402      58.692  45.719  30.366  1.00 29.58
ATOM   1887  CB  LEU   402      58.064  46.910  31.088  1.00 30.04
ATOM   1888  CG  LEU   402      59.025  47.974  31.594  1.00 30.14
ATOM   1889  CD1 LEU   402      58.270  49.263  31.880  1.00 29.61
ATOM   1890  CD2 LEU   402      59.734  47.438  32.827  1.00 27.99
ATOM   1891  C   LEU   402      57.693  44.583  30.368  1.00 30.10
ATOM   1892  O   LEU   402      57.836  43.631  31.121  1.00 29.78
ATOM   1893  N   GLU   403      56.688  44.683  29.510  1.00 30.49
ATOM   1894  CA  GLU   403      55.646  43.671  29.453  1.00 32.60
ATOM   1895  CB  GLU   403      54.562  44.094  28.469  1.00 37.01
ATOM   1896  CG  GLU   403      53.329  43.218  28.520  1.00 44.01
ATOM   1897  CD  GLU   403      52.263  43.632  27.523  1.00 48.50
ATOM   1898  OE1 GLU   403      52.516  44.525  26.677  1.00 49.66
ATOM   1899  OE2 GLU   403      51.157  43.050  27.594  1.00 53.06
ATOM   1900  C   GLU   403      56.083  42.237  29.151  1.00 32.03
ATOM   1901  O   GLU   403      55.627  41.304  29.816  1.00 32.58
ATOM   1902  N   VAL   404      56.955  42.078  28.159  0.50 31.51    ALTA
ATOM   1903  CA  VAL   404      57.450  40.765  27.739  0.50 30.96    ALTA
ATOM   1904  CB  VAL   404      58.108  40.849  26.333  0.50 30.32    ALTA
ATOM   1905  CG1 VAL   404      58.616  39.489  25.889  0.50 28.72    ALTA
ATOM   1906  CG2 VAL   404      57.115  41.388  25.328  0.50 31.67    ALTA
ATOM   1907  C   VAL   404      58.465  40.149  28.696  0.50 30.45    ALTA
ATOM   1908  O   VAL   404      58.549  38.926  28.822  0.50 30.10    ALTA
ATOM   1909  N   PHE   405      59.224  41.002  29.369  1.00 30.16
ATOM   1910  CA  PHE   405      60.266  40.549  30.263  1.00 30.65
ATOM   1911  CB  PHE   405      61.577  41.221  29.863  1.00 28.92
ATOM   1912  CG  PHE   405      62.062  40.834  28.493  1.00 26.31
ATOM   1913  CD1 PHE   405      62.342  41.804  27.543  1.00 25.72
ATOM   1914  CD2 PHE   405      62.269  39.500  28.166  1.00 25.92
ATOM   1915  CE1 PHE   405      62.827  41.456  26.278  1.00 26.78
ATOM   1916  CE2 PHE   405      62.752  39.139  26.910  1.00 25.39
ATOM   1917  CZ  PHE   405      63.034  40.122  25.962  1.00 24.39
ATOM   1918  C   PHE   405      60.011  40.674  31.771  1.00 32.10
ATOM   1919  O   PHE   405      60.903  40.237  32.533  1.00 33.88
ATOM   1920  OXT PHE   405      58.936  41.169  32.188  1.00 34.95
ATOM      1  O1  HOH   501      67.542  37.066  11.311  1.00 26.83
ATOM      3  O1  HOH   502      68.713  41.227  12.821  1.00 23.42
ATOM      2  O1  HOH   503      64.446  40.325  12.123  1.00 22.84
ATOM      4  O1  HOH   504      62.236  39.752  15.941  1.00 17.97
ATOM      5  O1  HOH   505      48.732  20.137   5.515  1.00 50.48
ATOM      6  O1  HOH   506      47.365  21.522   3.716  1.00 53.40
ATOM      7  O1  HOH   507      50.211  23.203   7.900  1.00 32.66
ATOM      8  O1  HOH   508      51.043  20.258   8.253  1.00 21.81
ATOM      9  O1  HOH   509      48.225  18.176   7.905  1.00 38.96
ATOM     10  O1  HOH   510      49.569  20.871  11.586  1.00 32.97
ATOM     11  O1  HOH   511      53.732  17.159  10.856  1.00 47.20
```

ATOM	12	O1	HOH	512	56.201	16.223	12.164	1.00	18.50
ATOM	13	O1	HOH	513	56.653	12.298	10.528	1.00	27.71
ATOM	14	O1	HOH	514	58.661	10.694	9.014	1.00	46.73
ATOM	15	O1	HOH	515	62.950	10.692	11.952	1.00	43.05
ATOM	16	O1	HOH	516	66.411	11.552	10.897	1.00	37.36
ATOM	17	O1	HOH	517	68.949	13.188	12.029	1.00	39.28
ATOM	18	O1	HOH	518	71.997	15.171	8.362	1.00	49.69
ATOM	19	O1	HOH	519	71.946	17.928	6.743	1.00	24.50
ATOM	20	O1	HOH	520	75.117	15.684	9.377	1.00	35.98
ATOM	21	O1	HOH	521	76.677	12.815	10.294	1.00	49.33
ATOM	22	O1	HOH	522	81.421	15.415	15.139	1.00	46.74
ATOM	23	O1	HOH	523	78.784	21.696	17.564	1.00	49.01
ATOM	24	O1	HOH	524	79.954	24.822	17.152	1.00	42.91
ATOM	25	O1	HOH	525	82.199	30.253	18.821	1.00	40.27
ATOM	26	O1	HOH	526	82.862	33.444	21.988	1.00	46.81
ATOM	27	O1	HOH	527	76.608	30.793	23.452	1.00	46.22
ATOM	28	O1	HOH	528	74.726	30.483	25.469	1.00	43.76
ATOM	29	O1	HOH	529	77.059	28.762	20.900	1.00	33.67
ATOM	30	O1	HOH	530	75.935	33.279	12.269	1.00	25.26
ATOM	31	O1	HOH	531	77.402	34.447	10.087	1.00	37.04
ATOM	32	O1	HOH	532	74.054	29.941	9.998	1.00	26.86
ATOM	33	O1	HOH	533	69.544	32.658	7.572	1.00	40.34
ATOM	34	O1	HOH	534	66.709	33.618	8.477	1.00	20.63
ATOM	35	O1	HOH	535	68.073	35.828	8.931	1.00	23.99
ATOM	36	O1	HOH	536	61.865	45.643	14.011	1.00	40.43
ATOM	37	O1	HOH	537	63.662	46.881	15.670	1.00	28.04
ATOM	38	O1	HOH	538	63.391	49.310	13.883	1.00	39.59
ATOM	39	O1	HOH	539	63.491	50.570	10.631	1.00	52.34
ATOM	40	O1	HOH	540	64.592	46.849	10.299	1.00	26.63
ATOM	41	O1	HOH	541	55.575	41.632	10.980	1.00	38.06
ATOM	42	O1	HOH	542	51.631	42.062	17.343	1.00	45.99
ATOM	43	O1	HOH	543	52.755	43.156	20.209	1.00	34.17
ATOM	44	O1	HOH	544	57.061	49.627	24.004	1.00	24.09
ATOM	45	O1	HOH	545	61.040	50.561	21.351	1.00	30.91
ATOM	46	O1	HOH	546	68.533	53.616	18.390	1.00	30.91
ATOM	47	O1	HOH	547	63.371	58.813	29.014	1.00	59.25
ATOM	48	O1	HOH	548	57.934	52.905	31.175	1.00	40.12
ATOM	49	O1	HOH	549	62.364	50.496	37.543	1.00	52.28
ATOM	50	O1	HOH	550	62.256	49.704	40.891	1.00	54.18
ATOM	51	O1	HOH	551	61.994	46.430	40.384	1.00	43.84
ATOM	52	O1	HOH	552	63.675	44.459	39.268	1.00	44.73
ATOM	53	O1	HOH	553	58.405	43.920	33.936	1.00	42.88
ATOM	54	O1	HOH	554	62.863	39.071	34.046	1.00	45.07
ATOM	55	O1	HOH	555	64.426	36.925	28.676	1.00	25.36
ATOM	56	O1	HOH	556	62.375	35.807	26.610	1.00	21.14
ATOM	57	O1	HOH	557	63.684	33.760	25.609	1.00	33.03
ATOM	58	O1	HOH	558	61.542	29.906	24.568	1.00	57.37

ATOM	59	O1	HOH	559	62.353	27.540	24.855	1.00	39.63
ATOM	60	O1	HOH	560	62.814	28.785	27.536	1.00	58.40
ATOM	61	O1	HOH	561	65.531	30.642	28.821	1.00	54.44
ATOM	62	O1	HOH	562	63.423	24.645	32.964	1.00	50.75
ATOM	63	O1	HOH	563	64.697	21.149	28.711	1.00	51.41
ATOM	64	O1	HOH	564	67.100	23.370	26.900	1.00	52.36
ATOM	65	O1	HOH	565	65.582	20.422	23.303	1.00	40.32
ATOM	66	O1	HOH	566	61.577	18.167	23.386	1.00	65.08
ATOM	67	O1	HOH	567	61.022	22.649	25.573	1.00	48.85
ATOM	68	O1	HOH	568	57.919	21.446	25.147	1.00	43.39
ATOM	69	O1	HOH	569	59.435	20.179	28.543	1.00	51.41
ATOM	70	O1	HOH	570	53.860	23.216	30.984	1.00	50.28
ATOM	71	O1	HOH	571	52.825	24.880	32.696	1.00	43.96
ATOM	72	O1	HOH	572	48.228	29.683	30.486	1.00	44.51
ATOM	73	O1	HOH	573	48.925	34.467	30.521	1.00	36.28
ATOM	74	O1	HOH	574	50.766	40.547	29.178	1.00	51.45
ATOM	75	O1	HOH	575	57.058	32.490	30.420	1.00	31.03
ATOM	76	O1	HOH	576	58.075	29.544	24.664	1.00	19.54
ATOM	77	O1	HOH	577	47.451	19.292	28.703	1.00	33.04
ATOM	78	O1	HOH	578	53.120	15.471	17.478	1.00	35.68
ATOM	79	O1	HOH	579	55.101	14.146	16.095	1.00	50.46
ATOM	80	O1	HOH	580	53.726	14.016	9.059	1.00	41.44
ATOM	81	O1	HOH	581	57.223	13.820	1.435	1.00	48.31
ATOM	82	O1	HOH	582	61.169	15.688	0.210	1.00	17.60
ATOM	83	O1	HOH	583	67.411	16.019	-0.314	1.00	23.93
ATOM	84	O1	HOH	584	67.033	17.221	-2.796	1.00	26.21
ATOM	85	O1	HOH	585	69.893	19.520	-1.582	1.00	59.67
ATOM	86	O1	HOH	586	68.489	22.464	0.350	1.00	37.85
ATOM	87	O1	HOH	587	65.794	23.354	0.823	1.00	27.38
ATOM	88	O1	HOH	588	67.550	26.810	0.937	1.00	37.18
ATOM	89	O1	HOH	589	64.646	28.208	3.323	1.00	36.74
ATOM	90	O1	HOH	590	67.215	31.103	3.174	1.00	30.29
ATOM	91	O1	HOH	591	64.164	35.667	6.220	1.00	39.72
ATOM	92	O1	HOH	592	62.810	37.518	4.836	1.00	48.48
ATOM	93	O1	HOH	593	68.105	36.898	6.110	1.00	58.00
ATOM	94	O1	HOH	594	57.390	37.485	2.631	1.00	37.29
ATOM	95	O1	HOH	595	53.088	36.068	3.949	1.00	50.10
ATOM	96	O1	HOH	596	52.974	34.676	6.758	1.00	42.52
ATOM	97	O1	HOH	597	58.581	31.465	2.076	1.00	32.18
ATOM	98	O1	HOH	598	52.786	23.277	1.357	1.00	28.98
ATOM	99	O1	HOH	599	47.501	26.551	7.672	1.00	47.83
ATOM	100	O1	HOH	600	46.411	35.754	14.049	1.00	53.46
ATOM	101	O1	HOH	601	63.514	14.944	15.842	1.00	55.02
ATOM	102	O1	HOH	602	67.943	11.792	3.438	1.00	61.21
ATOM	103	O1	HOH	603	62.232	9.378	3.311	1.00	35.65
ATOM	104	O1	HOH	604	76.734	22.468	5.002	1.00	42.56
ATOM	105	O1	HOH	605	83.589	28.967	9.626	1.00	50.64

```
ATOM    106  O1  HOH   606      82.807  43.437  17.940  1.00 39.28
ATOM    107  O1  HOH   607      83.882  45.673  20.638  1.00 41.64
ATOM    108  O1  HOH   608      80.215  41.021  23.441  1.00 43.16
ATOM    109  O1  HOH   609      79.459  46.296  31.165  1.00 32.40
ATOM    110  O1  HOH   610      81.880  47.681  33.923  1.00 46.96
ATOM    111  O1  HOH   611      75.594  46.142  30.384  1.00 28.64
ATOM    112  O1  HOH   612      77.118  40.568  32.575  1.00 34.21
ATOM    113  O1  HOH   613      73.563  41.750  36.926  1.00 26.07
ATOM    114  O1  HOH   614      75.955  56.565  28.863  1.00 46.31
ATOM    115  O1  HOH   615      79.915  59.136  15.809  1.00 50.81
ATOM    116  O1  HOH   616      77.390  52.542   8.816  1.00 34.34
ATOM    117  O1  HOH   617      72.726  25.005  29.671  1.00 62.84
ATOM   2038  C   ACY   701      52.664  40.106  24.800  1.00 46.39
ATOM   2039  O   ACY   701      53.721  39.649  24.298  1.00 47.12
ATOM   2040  OXT ACY   701      51.652  40.521  24.172  1.00 46.96
ATOM   2041  CH3 ACY   701      52.600  40.162  26.329  1.00 45.99
ATOM   2050  C1  T3      1      66.961  42.243  18.491  1.00 22.34
ATOM   2051  C2  T3      1      68.748  43.593  23.015  1.00 21.84
ATOM   2052  C3  T3      1      66.873  43.557  18.970  1.00 23.43
ATOM   2053  C4  T3      1      69.252  44.540  23.871  1.00 22.31
ATOM   2054  C5  T3      1      67.638  43.989  20.011  1.00 24.83
ATOM   2055  C6  T3      1      68.851  44.553  25.178  1.00 25.16
ATOM   2056  C7  T3      1      68.541  43.108  20.632  1.00 24.65
ATOM   2057  C8  T3      1      67.895  43.567  25.639  1.00 21.93
ATOM   2058  C9  T3      1      68.665  41.792  20.183  1.00 25.09
ATOM   2059  C10 T3      1      67.427  42.654  24.733  1.00 23.66
ATOM   2060  C11 T3      1      67.878  41.380  19.117  1.00 23.12
ATOM   2061  C12 T3      1      67.829  42.624  23.384  1.00 19.67
ATOM   2062  C13 T3      1      66.055  41.788  17.371  1.00 18.97
ATOM   2063  C15 T3      1      66.721  40.956  16.295  1.00 19.32
ATOM   2064  C17 T3      1      65.901  40.829  15.051  1.00 19.02
ATOM   2065  I1  T3      1      67.393  45.986  20.621  1.00 25.29
ATOM   2066  I2  T3      1      69.483  46.066  26.432  1.00 26.49
ATOM   2067  I3  T3      1      70.019  40.450  20.975  1.00 25.67
ATOM   2068  N1  T3      1      68.131  41.337  16.037  1.00 15.12
ATOM   2069  O1  T3      1      67.542  43.587  26.966  1.00 21.79
ATOM   2070  O2  T3      1      69.259  43.600  21.682  1.00 22.05
ATOM   2071  O3  T3      1      66.504  40.852  13.963  1.00 20.38
ATOM   2072  O4  T3      1      64.675  40.731  15.192  1.00 20.16
END
```

APPENDIX 7

TRBTRIAC.PDB

```
REMARK TR-beta Triac Full length numbering
REMARK refinement resolution: 100 - 2.9 A  r= 0.273258 free_r= 0.333794
REMARK wa= 5.78307
REMARK target= mlf cycles= 1 steps= 25
REMARK a= 68.72 b= 68.72 c= 130.092 alpha= 90 beta= 90 gamma= 120
REMARK ncs= none
REMARK initial B-factor correction: "none"
REMARK ALA 199 to ALA 201 from His-tag
REMARK
REMARK Four cacodylate-modified cysteines (CYA)
REMARK Cys294, Cys298, Cys388, Cys434
REMARK cacodylate modeled as single arsenic atom
REMARK
REMARK side chain of certain residues modeled as ALA due to poor density;
REMARK however, residue name reflects true residue for clarity
REMARK
REMARK amino acid sequence confirmed,
REMARK differing from that reported by Weinberger et. al.
REMARK in the following codons:
REMARK 243 Pro - Arg
REMARK 337 Ile - Thr
REMARK 451 Leu - Phe
REMARK as reported by Sakurai et. al.
REMARK note also correction of initiation codon,
REMARK yielding a polypeptide of 461 amino acids

JRNL  AUTH A.SAKURAI,A.NAKAI,L.J.DEGROOT
JRNL  TITL STRUCTURAL ANALYSIS OF HUMAN THYROID HORMONE RECEPTOR
JRNL  TITL2 BETA GENE
JRNL  REF MOL.CELL.ENDO.   V.71  1990
JRNL  AUTH C.WEINBERGER, C.C.THOMPSON,R.LEBO,D.J.GRUOL,R.M.EVANS
JRNL  TITL  THE C-ERB-A GENE ENCODES A THYROID HORMONE RECEPTOR
JRNL  REF   NATURE            V.324 6098 1986

ATOM     1  CB  ALA   199     31.247  28.289  43.613  1.00 71.30      PROT
ATOM     2  C   ALA   199     32.916  26.485  44.170  1.00 68.99      PROT
ATOM     3  O   ALA   199     33.485  25.410  43.976  1.00 63.84      PROT
ATOM     4  N   ALA   199     30.462  25.993  44.096  1.00 75.00      PROT
ATOM     5  CA  ALA   199     31.571  26.795  43.497  1.00 73.24      PROT
ATOM     6  N   ALA   200     33.419  27.432  44.958  1.00 73.81      PROT
ATOM     7  CA  ALA   200     34.686  27.251  45.658  1.00 67.87      PROT
ATOM     8  CB  ALA   200     35.182  28.583  46.203  1.00 62.83      PROT
ATOM     9  C   ALA   200     34.539  26.239  46.791  1.00 63.23      PROT
```

```
ATOM   10  O   ALA  200      35.486  25.986  47.534  1.00 59.14      PROT
ATOM   11  N   ALA  201      33.345  25.670  46.932  1.00 56.98      PROT
ATOM   12  CA  ALA  201      33.117  24.664  47.957  1.00 51.46      PROT
ATOM   13  CB  ALA  201      31.776  23.992  47.744  1.00 40.35      PROT
ATOM   14  C   ALA  201      34.248  23.662  47.762  1.00 53.15      PROT
ATOM   15  O   ALA  201      34.624  22.938  48.679  1.00 54.90      PROT
ATOM   16  N   GLU  202      34.789  23.645  46.546  1.00 44.13      PROT
ATOM   17  CA  GLU  202      35.891  22.767  46.190  1.00 37.47      PROT
ATOM   18  CB  GLU  202      36.086  22.760  44.671  1.00 37.74      PROT
ATOM   19  CG  GLU  202      37.060  21.702  44.173  1.00 57.14      PROT
ATOM   20  CD  GLU  202      36.457  20.303  44.140  1.00 61.74      PROT
ATOM   21  OE1 GLU  202      35.211  20.175  44.133  1.00 63.81      PROT
ATOM   22  OE2 GLU  202      37.236  19.327  44.115  1.00 65.54      PROT
ATOM   23  C   GLU  202      37.156  23.266  46.878  1.00 35.54      PROT
ATOM   24  O   GLU  202      37.874  22.492  47.510  1.00 32.70      PROT
ATOM   25  N   GLU  203      37.415  24.566  46.755  1.00 31.79      PROT
ATOM   26  CA  GLU  203      38.588  25.188  47.366  1.00 33.63      PROT
ATOM   27  CB  GLU  203      38.603  26.683  47.079  1.00 28.28      PROT
ATOM   28  C   GLU  203      38.588  24.948  48.869  1.00 33.86      PROT
ATOM   29  O   GLU  203      39.644  24.818  49.485  1.00 33.10      PROT
ATOM   30  N   LEU  204      37.393  24.898  49.451  1.00 34.15      PROT
ATOM   31  CA  LEU  204      37.244  24.650  50.876  1.00 33.22      PROT
ATOM   32  CB  LEU  204      35.853  25.081  51.353  1.00 30.47      PROT
ATOM   33  CG  LEU  204      35.567  25.083  52.862  1.00 23.17      PROT
ATOM   34  CD1 LEU  204      35.904  26.439  53.443  1.00  5.41      PROT
ATOM   35  CD2 LEU  204      34.106  24.748  53.111  1.00 12.70      PROT
ATOM   36  C   LEU  204      37.424  23.156  51.100  1.00 40.17      PROT
ATOM   37  O   LEU  204      38.219  22.736  51.951  1.00 45.33      PROT
ATOM   38  N   GLN  205      36.682  22.360  50.329  1.00 43.86      PROT
ATOM   39  CA  GLN  205      36.754  20.899  50.415  1.00 43.96      PROT
ATOM   40  CB  GLN  205      36.089  20.261  49.184  1.00 45.56      PROT
ATOM   41  CG  GLN  205      34.562  20.195  49.245  1.00 42.39      PROT
ATOM   42  CD  GLN  205      34.022  18.775  49.159  1.00 46.79      PROT
ATOM   43  OE1 GLN  205      33.258  18.444  48.252  1.00 38.84      PROT
ATOM   44  NE2 GLN  205      34.412  17.932  50.109  1.00 37.95      PROT
ATOM   45  C   GLN  205      38.224  20.482  50.483  1.00 42.39      PROT
ATOM   46  O   GLN  205      38.630  19.702  51.355  1.00 36.27      PROT
ATOM   47  N   LYS  206      39.014  21.015  49.553  1.00 42.37      PROT
ATOM   48  CA  LYS  206      40.440  20.729  49.505  1.00 44.40      PROT
ATOM   49  CB  LYS  206      41.110  21.531  48.385  1.00 38.73      PROT
ATOM   50  C   LYS  206      41.024  21.118  50.853  1.00 42.36      PROT
ATOM   51  O   LYS  206      41.550  20.271  51.570  1.00 46.93      PROT
ATOM   52  N   SER  207      40.913  22.401  51.192  1.00 34.68      PROT
ATOM   53  CA  SER  207      41.415  22.933  52.455  1.00 29.43      PROT
ATOM   54  CB  SER  207      40.690  24.228  52.791  1.00 24.63      PROT
ATOM   55  OG  SER  207      41.327  25.332  52.173  1.00 36.56      PROT
```

ATOM	56	C	SER	207	41.254	21.958	53.614	1.00	29.20	PROT
ATOM	57	O	SER	207	42.223	21.623	54.293	1.00	31.01	PROT
ATOM	58	N	ILE	208	40.028	21.504	53.841	1.00	22.55	PROT
ATOM	59	CA	ILE	208	39.777	20.568	54.928	1.00	27.93	PROT
ATOM	60	CB	ILE	208	38.267	20.216	55.027	1.00	39.85	PROT
ATOM	61	CG2	ILE	208	38.062	18.895	55.769	1.00	32.13	PROT
ATOM	62	CG1	ILE	208	37.528	21.340	55.753	1.00	37.63	PROT
ATOM	63	CD1	ILE	208	36.788	22.296	54.827	1.00	41.47	PROT
ATOM	64	C	ILE	208	40.591	19.291	54.725	1.00	29.61	PROT
ATOM	65	O	ILE	208	40.905	18.580	55.679	1.00	40.00	PROT
ATOM	66	N	GLY	209	40.928	19.002	53.475	1.00	35.05	PROT
ATOM	67	CA	GLY	209	41.698	17.809	53.181	1.00	31.94	PROT
ATOM	68	C	GLY	209	40.826	16.695	52.643	1.00	28.66	PROT
ATOM	69	O	GLY	209	41.257	15.553	52.532	1.00	19.46	PROT
ATOM	70	N	HIS	210	39.586	17.021	52.313	1.00	20.47	PROT
ATOM	71	CA	HIS	210	38.684	16.018	51.774	1.00	26.99	PROT
ATOM	72	CB	HIS	210	37.240	16.451	52.012	1.00	37.16	PROT
ATOM	73	C	HIS	210	38.959	15.806	50.266	1.00	27.75	PROT
ATOM	74	O	HIS	210	39.328	16.741	49.550	1.00	34.08	PROT
ATOM	75	N	LYS	211	38.807	14.566	49.805	1.00	16.50	PROT
ATOM	76	CA	LYS	211	39.019	14.206	48.403	1.00	5.57	PROT
ATOM	77	CB	LYS	211	39.932	12.981	48.295	1.00	5.67	PROT
ATOM	78	CG	LYS	211	41.370	13.208	48.742	1.00	7.30	PROT
ATOM	79	CD	LYS	211	41.873	14.594	48.347	1.00	14.34	PROT
ATOM	80	CE	LYS	211	43.339	14.556	47.897	1.00	29.48	PROT
ATOM	81	NZ	LYS	211	43.777	15.851	47.262	1.00	33.43	PROT
ATOM	82	C	LYS	211	37.642	13.861	47.876	1.00	2.73	PROT
ATOM	83	O	LYS	211	37.176	12.741	48.039	1.00	6.57	PROT
ATOM	84	N	PRO	212	36.983	14.813	47.208	1.00	2.00	PROT
ATOM	85	CD	PRO	212	37.472	16.156	46.846	1.00	10.43	PROT
ATOM	86	CA	PRO	212	35.642	14.542	46.689	1.00	2.05	PROT
ATOM	87	CB	PRO	212	35.088	15.928	46.341	1.00	10.09	PROT
ATOM	88	CG	PRO	212	36.240	16.888	46.422	1.00	8.43	PROT
ATOM	89	C	PRO	212	35.523	13.578	45.520	1.00	2.00	PROT
ATOM	90	O	PRO	212	36.344	13.554	44:611	1.00	6.04	PROT
ATOM	91	N	GLU	213	34.476	12.773	45.577	1.00	2.68	PROT
ATOM	92	CA	GLU	213	34.181	11.817	44.542	1.00	6.81	PROT
ATOM	93	CB	GLU	213	33.539	10.594	45.173	1.00	7.20	PROT
ATOM	94	CG	GLU	213	34.222	10.232	46.462	1.00	15.33	PROT
ATOM	95	CD	GLU	213	34.293	8.743	46.689	1.00	21.36	PROT
ATOM	96	OE1	GLU	213	33.334	8.051	46.290	1.00	29.32	PROT
ATOM	97	OE2	GLU	213	35.301	8.265	47.268	1.00	28.50	PROT
ATOM	98	C	GLU	213	33.229	12.543	43.584	1.00	12.00	PROT
ATOM	99	O	GLU	213	32.693	13.599	43.926	1.00	19.02	PROT
ATOM	100	N	PRO	214	33.011	11.985	42.375	1.00	25.74	PROT
ATOM	101	CD	PRO	214	33.592	10.692	41.973	1.00	28.98	PROT

```
ATOM   102  CA  PRO  214      32.145  12.536  41.322  1.00 23.38      PROT
ATOM   103  CB  PRO  214      32.180  11.476  40.232  1.00 18.01      PROT
ATOM   104  CG  PRO  214      33.376  10.665  40.514  1.00 27.50      PROT
ATOM   105  C   PRO  214      30.715  12.828  41.734  1.00 25.02      PROT
ATOM   106  O   PRO  214      30.069  11.986  42.355  1.00 31.17      PROT
ATOM   107  N-  THR  215      30.211  14.009  41.377  1.00 19.56      PROT
ATOM   108  CA  THR  215      28.830  14.352  41.714  1.00 24.48      PROT
ATOM   109  CB  THR  215      28.535  15.841  41.522  1.00 27.13      PROT
ATOM   110  OG1 THR  215      27.939  16.038  40.234  1.00 40.19      PROT
ATOM   111  CG2 THR  215      29.805  16.659  41.640  1.00 30.81      PROT
ATOM   112  C   THR  215      27.899  13.562  40.805  1.00 22.14      PROT
ATOM   113  O   THR  215      28.357  12.905  39.883  1.00 27.52      PROT
ATOM   114  N   ASP  216      26.599  13.617  41.072  1.00 35.65      PROT
ATOM   115  CA  ASP  216      25.631  12.890  40.258  1.00 41.16      PROT
ATOM   116  CB  ASP  216      24.219  13.091  40.810  1.00 38.17      PROT
ATOM   117  C   ASP  216      25.714  13.370  38.810  1.00 40.44      PROT
ATOM   118  O   ASP  216      25.683  12.569  37.874  1.00 38.26      PROT
ATOM   119  N   GLU  217      25.832  14.682  38.635  1.00 40.14      PROT
ATOM   120  CA  GLU  217      25.932  15.275  37.305  1.00 38.89      PROT
ATOM   121  CB  GLU  217      25.883  16.796  37.413  1.00 29.95      PROT
ATOM   122  C   GLU  217      27.231  14.829  36.619  1.00 39.44      PROT
ATOM   123  O   GLU  217      27.245  14.525  35.425  1.00 40.08      PROT
ATOM   124  N   GLU  218      28.319  14.794  37.384  1.00 34.92      PROT
ATOM   125  CA  GLU  218      29.615  14.370  36.871  1.00 23.70      PROT
ATOM   126  CB  GLU  218      30.698  14.606  37.924  1.00 18.47      PROT
ATOM   127  CG  GLU  218      30.990  16.067  38.198  1.00 15.66      PROT
ATOM   128  CD  GLU  218      32.085  16.264  39.231  1.00 26.88      PROT
ATOM   129  OE1 GLU  218      32.164  15.458  40.191  1.00 25.07      PROT
ATOM   130  OE2 GLU  218      32.864  17.232  39.078  1.00 33.79      PROT
ATOM   131  C   GLU  218      29.589  12.892  36.491  1.00 21.05      PROT
ATOM   132  O   GLU  218      30.182  12.490  35.495  1.00 24.30      PROT
ATOM   133  N   TRP  219      28.907  12.080  37.288  1.00 13.98      PROT
ATOM   134  CA  TRP  219      28.829  10.660  37.000  1.00 17.30      PROT
ATOM   135  CB  TRP  219      28.052   9.921  38.089  1.00 16.27      PROT
ATOM   136  CG  TRP  219      28.890   9.520  39.277  1.00 31.14      PROT
ATOM   137  CD2 TRP  219      29.984   8.585  39.296  1.00 36.40      PROT
ATOM   138  CE2 TRP  219      30.476   8.547  40.621  1.00 29.24      PROT
ATOM   139  CE3 TRP  219      30.595   7.781  38.323  1.00 41.61      PROT
ATOM   140  CD1 TRP  219      28.771   9.988  40.551  1.00 28.69      PROT
ATOM   141  NE1 TRP  219      29.718   9.411  41.362  1.00 35.01      PROT
ATOM   142  CZ2 TRP  219      31.552   7.737  41.004  1.00 30.89      PROT
ATOM   143  CZ3 TRP  219      31.673   6.969  38.707  1.00 45.72      PROT
ATOM   144  CH2 TRP  219      32.137   6.958  40.038  1.00 35.17      PROT
ATOM   145  C   TRP  219      28.125  10.500  35.660  1.00 20.83      PROT
ATOM   146  O   TRP  219      28.467   9.616  34.865  1.00 31.36      PROT
ATOM   147  N   GLU  220      27.143  11.364  35.412  1.00 30.53      PROT
```

ATOM 148 CA GLU 220 26.400 11.323 34.159 1.00 33.95 PROT
ATOM 149 CB GLU 220 25.237 12.318 34.201 1.00 22.17 PROT
ATOM 150 C GLU 220 27.356 11.658 33.013 1.00 34.66 PROT
ATOM 151 O GLU 220 27.233 11.134 31.900 1.00 43.86 PROT
ATOM 152 N LEU 221 28.320 12.528 33.297 1.00 22.60 PROT
ATOM 153 CA LEU 221 29.305 12.926 32.304 1.00 17.18 PROT
ATOM 154 CB LEU 221 29.995 14.219 32.743 1.00 11.03 PROT
ATOM 155 CG LEU 221 31.078 14.824 31.850 1.00 5.17 PROT
ATOM 156 CD1 LEU 221 30.756 14.569 30.415 1.00 6.41 PROT
ATOM 157 CD2 LEU 221 31.181 16.305 32.092 1.00 10.65 PROT
ATOM 158 C LEU 221 30.344 11.817 32.122 1.00 22.25 PROT
ATOM 159 O LEU 221 30.759 11.521 31.002 1.00 18.99 PROT
ATOM 160 N ILE 222 30.754 11.198 33.228 1.00 20.74 PROT
ATOM 161 CA ILE 222 31.744 10.136 33.177 1.00 12.88 PROT
ATOM 162 CB ILE 222 32.115 9.662 34.587 1.00 12.96 PROT
ATOM 163 CG2 ILE 222 33.030 8.468 34.515 1.00 2.00 PROT
ATOM 164 CG1 ILE 222 32.811 10.796 35.332 1.00 16.50 PROT
ATOM 165 CD1 ILE 222 33.625 10.351 36.511 1.00 15.90 PROT
ATOM 166 C ILE 222 31.241 8.958 32.363 1.00 17.72 PROT
ATOM 167 O ILE 222 32.001 8.363 31.594 1.00 16.59 PROT
ATOM 168 N LYS 223 29.966 8.618 32.530 1.00 33.88 PROT
ATOM 169 CA LYS 223 29.371 7.503 31.795 1.00 39.02 PROT
ATOM 170 CB LYS 223 27.908 7.307 32.224 1.00 40.29 PROT
ATOM 171 C LYS 223 29.444 7.779 30.293 1.00 39.14 PROT
ATOM 172 O LYS 223 29.949 6.963 29.517 1.00 32.99 PROT
ATOM 173 N THR 224 28.936 8.942 29.897 1.00 27.19 PROT
ATOM 174 CA THR 224 28.929 9.363 28.498 1.00 25.75 PROT
ATOM 175 CB THR 224 28.440 10.817 28.407 1.00 22.51 PROT
ATOM 176 OG1 THR 224 27.018 10.837 28.568 1.00 35.46 PROT
ATOM 177 CG2 THR 224 28.799 11.436 27.083 1.00 15.53 PROT
ATOM 178 C THR 224 30.307 9.235 27.833 1.00 22.31 PROT
ATOM 179 O THR 224 30.480 8.517 26.843 1.00 27.13 PROT
ATOM 180 N VAL 225 31.287 9.936 28.386 1.00 17.87 PROT
ATOM 181 CA VAL 225 32.635 9.906 27.854 1.00 17.07 PROT
ATOM 182 CB VAL 225 33.559 10.759 28.720 1.00 16.86 PROT
ATOM 183 CG1 VAL 225 34.845 11.064 27.973 1.00 26.54 PROT
ATOM 184 CG2 VAL 225 32.854 12.057 29.075 1.00 24.46 PROT
ATOM 185 C VAL 225 33.169 8.486 27.793 1.00 16.11 PROT
ATOM 186 O VAL 225 33.683 8.042 26.763 1.00 12.75 PROT
ATOM 187 N THR 226 33.040 7.769 28.900 1.00 12.23 PROT
ATOM 188 CA THR 226 33.520 6.400 28.951 1.00 12.34 PROT
ATOM 189 CB THR 226 33.175 5.747 30.271 1.00 17.01 PROT
ATOM 190 OG1 THR 226 33.715 6.536 31.342 1.00 6.78 PROT
ATOM 191 CG2 THR 226 33.739 4.324 30.307 1.00 2.00 PROT
ATOM 192 C THR 226 32.909 5.581 27.837 1.00 14.82 PROT
ATOM 193 O THR 226 33.623 4.953 27.061 1.00 20.90 PROT

ATOM 194 N GLU 227 31.582 5.588 27.758 1.00 22.90 PROT
ATOM 195 CA GLU 227 30.886 4.849 26.714 1.00 22.63 PROT
ATOM 196 CB GLU 227 29.417 5.248 26.678 1.00 20.14 PROT
ATOM 197 C GLU 227 31.556 5.173 25.386 1.00 21.74 PROT
ATOM 198 O GLU 227 32.057 4.283 24.700 1.00 24.42 PROT
ATOM 199 N- ALA 228 31.590 6.460 25.050 1.00 13.26 PROT
ATOM 200 CA ALA 228 32.196 6.928 23.800 1.00 22.76 PROT
ATOM 201 CB ALA 228 32.267 8.450 23.785 1.00 22.50 PROT
ATOM 202 C ALA 228 33.584 6.358 23.538 1.00 19.19 PROT
ATOM 203 O ALA 228 33.913 6.003 22.408 1.00 17.19 PROT
ATOM 204 N HIS 229 34.408 6.290 24.573 1.00 20.11 PROT
ATOM 205 CA HIS 229 35.741 5.756 24.389 1.00 18.68 PROT
ATOM 206 CB HIS 229 36.537 5.819 25.686 1.00 10.37 PROT
ATOM 207 CG HIS 229 37.894 5.201 25.586 1.00 2.00 PROT
ATOM 208 CD2 HIS 229 38.524 4.299 26.376 1.00 7.61 PROT
ATOM 209 ND1 HIS 229 38.780 5.517 24.582 1.00 3.78 PROT
ATOM 210 CE1 HIS 229 39.900 4.837 24.758 1.00 15.67 PROT
ATOM 211 NE2 HIS 229 39.771 4.090 25.840 1.00 7.10 PROT
ATOM 212 C HIS 229 35.637 4.316 23.940 1.00 21.45 PROT
ATOM 213 O HIS 229 36.127 3.950 22.866 1.00 22.42 PROT
ATOM 214 N VAL 230 34.983 3.505 24.762 1.00 21.64 PROT
ATOM 215 CA VAL 230 34.827 2.086 24.468 1.00 33.80 PROT
ATOM 216 CB VAL 230 33.960 1.388 25.528 1.00 33.11 PROT
ATOM 217 CG1 VAL 230 34.251 -0.106 25.515 1.00 33.80 PROT
ATOM 218 CG2 VAL 230 34.228 1.985 26.896 1.00 26.54 PROT
ATOM 219 C VAL 230 34.224 1.781 23.100 1.00 33.12 PROT
ATOM 220 O VAL 230 34.703 0.897 22.385 1.00 40.80 PROT
ATOM 221 N ALA 231 33.170 2.507 22.746 1.00 36.22 PROT
ATOM 222 CA ALA 231 32.497 2.298 21.471 1.00 36.24 PROT
ATOM 223 CB ALA 231 31.318 3.255 21.343 1.00 18.90 PROT
ATOM 224 C ALA 231 33.445 2.501 20.303 1.00 37.54 PROT
ATOM 225 O ALA 231 33.342 1.816 19.285 1.00 35.93 PROT
ATOM 226 N THR 232 34.380 3.434 20.474 1.00 23.74 PROT
ATOM 227 CA THR 232 35.329 3.789 19.432 1.00 15.54 PROT
ATOM 228 CB THR 232 35.335 5.321 19.238 1.00 9.70 PROT
ATOM 229 OG1 THR 232 35.733 5.949 20.460 1.00 16.73 PROT
ATOM 230 CG2 THR 232 33.942 5.828 18.891 1.00 2.00 PROT
ATOM 231 C THR 232 36.758 3.309 19.670 1.00 19.86 PROT
ATOM 232 O THR 232 37.695 3.854 19.094 1.00 15.31 PROT
ATOM 233 N ASN 233 36.938 2.305 20.523 1.00 28.26 PROT
ATOM 234 CA ASN 233 38.280 1.771 20.772 1.00 39.32 PROT
ATOM 235 CB ASN 233 38.435 1.343 22.234 1.00 47.14 PROT
ATOM 236 CG ASN 233 39.804 1.689 22.801 1.00 54.02 PROT
ATOM 237 OD1 ASN 233 40.633 2.303 22.128 1.00 60.36 PROT
ATOM 238 ND2 ASN 233 40.045 1.296 24.045 1.00 48.67 PROT
ATOM 239 C ASN 233 38.507 0.574 19.840 1.00 49.33 PROT

```
ATOM   240  O   ASN  233      38.338   0.693  18.625  1.00 65.36      PROT
ATOM   241  N   ALA  234      38.877  -0.577  20.388  1.00 57.89      PROT
ATOM   242  CA  ALA  234      39.090  -1.752  19.552  1.00 57.22      PROT
ATOM   243  CB  ALA  234      40.372  -1.595  18.754  1.00 48.03      PROT
ATOM   244  C   ALA  234      39.141  -3.027  20.384  1.00 62.42      PROT
ATOM   245  O-  ALA  234      38.471  -3.073  21.440  1.00 56.93      PROT
ATOM   246  OT  ALA  234      39.853  -3.968  19.965  1.00 76.16      PROT
ATOM   247  N   TRP  239      41.987  -7.449  22.970  1.00 58.82      PROT
ATOM   248  CA  TRP  239      43.077  -6.886  22.154  1.00 51.37      PROT
ATOM   249  CB  TRP  239      43.325  -5.406  22.534  1.00 45.12      PROT
ATOM   250  CG  TRP  239      44.193  -5.170  23.760  1.00 43.09      PROT
ATOM   251  CD2 TRP  239      45.617  -5.037  23.793  1.00 32.36      PROT
ATOM   252  CE2 TRP  239      45.990  -4.872  25.142  1.00 28.37      PROT
ATOM   253  CE3 TRP  239      46.615  -5.049  22.813  1.00 40.79      PROT
ATOM   254  CD1 TRP  239      43.773  -5.073  25.059  1.00 46.63      PROT
ATOM   255  NE1 TRP  239      44.847  -4.896  25.893  1.00 27.08      PROT
ATOM   256  CZ2 TRP  239      47.315  -4.717  25.535  1.00 35.48      PROT
ATOM   257  CZ3 TRP  239      47.936  -4.896  23.204  1.00 40.18      PROT
ATOM   258  CH2 TRP  239      48.273  -4.733  24.554  1.00 49.93      PROT
ATOM   259  C   TRP  239      44.422  -7.623  22.063  1.00 49.76      PROT
ATOM   260  O   TRP  239      44.944  -7.799  20.962  1.00 48.14      PROT
ATOM   261  N   LYS  240      44.975  -8.048  23.198  1.00 38.92      PROT
ATOM   262  CA  LYS  240      46.263  -8.735  23.232  1.00 37.29      PROT
ATOM   263  CB  LYS  240      46.572  -9.196  24.657  1.00 38.79      PROT
ATOM   264  CG  LYS  240      47.106  -8.099  25.571  1.00 38.43      PROT
ATOM   265  CD  LYS  240      48.307  -8.584  26.370  1.00 35.71      PROT
ATOM   266  CE  LYS  240      48.631  -7.646  27.523  1.00 37.87      PROT
ATOM   267  NZ  LYS  240      49.058  -8.377  28.750  1.00 28.85      PROT
ATOM   268  C   LYS  240      46.404  -9.914  22.269  1.00 42.18      PROT
ATOM   269  O   LYS  240      47.491 -10.132  21.732  1.00 45.89      PROT
ATOM   270  N   GLN  241      45.331 -10.679  22.058  1.00 46.08      PROT
ATOM   271  CA  GLN  241      45.390 -11.816  21.133  1.00 45.02      PROT
ATOM   272  CB  GLN  241      44.575 -13.011  21.638  1.00 46.30      PROT
ATOM   273  CG  GLN  241      44.284 -13.018  23.116  1.00 60.38      PROT
ATOM   274  CD  GLN  241      42.828 -13.312  23.408  1.00 63.76      PROT
ATOM   275  OE1 GLN  241      42.154 -13.988  22.631  1.00 66.34      PROT
ATOM   276  NE2 GLN  241      42.333 -12.801  24.531  1.00 69.18      PROT
ATOM   277  C   GLN  241      44.866 -11.405  19.764  1.00 45.77      PROT
ATOM   278  O   GLN  241      45.107 -12.085  18.765  1.00 51.18      PROT
ATOM   279  N   LYS  242      44.132 -10.300  19.723  1.00 42.04      PROT
ATOM   280  CA  LYS  242      43.613  -9.794  18.464  1.00 48.33      PROT
ATOM   281  CB  LYS  242      42.498  -8.786  18.727  1.00 40.17      PROT
ATOM   282  C   LYS  242      44.796  -9.123  17.742  1.00 53.04      PROT
ATOM   283  O   LYS  242      44.709  -8.753  16.565  1.00 48.21      PROT
ATOM   284  N   ARG  243      45.906  -8.992  18.470  1.00 45.44      PROT
ATOM   285  CA  ARG  243      47.128  -8.374  17.965  1.00 43.53      PROT
```

ATOM 286 CB ARG 243 48.108 -8.135 19.118 1.00 40.21 PROT
ATOM 287 C ARG 243 47.795 -9.220 16.892 1.00 45.96 PROT
ATOM 288 O ARG 243 47.684 -10.443 16.894 1.00 50.22 PROT
ATOM 289 N LYS 244 48.498 -8.551 15.982 1.00 52.12 PROT
ATOM 290 CA LYS 244 49.202 -9.202 14.879 1.00 45.30 PROT
ATOM 291 CB LYS 244 48.466 -8.950 13.558 1.00 48.24 PROT
ATOM 292 CG LYS 244 47.109 -9.631 13.446 1.00 53.78 PROT
ATOM 293 CD LYS 244 46.835 -10.078 12.011 1.00 60.50 PROT
ATOM 294 CE LYS 244 46.038 -9.030 11.241 1.00 61.03 PROT
ATOM 295 NZ LYS 244 45.455 -7.997 12.146 1.00 55.25 PROT
ATOM 296 C LYS 244 50.616 -8.641 14.786 1.00 40.33 PROT
ATOM 297 O LYS 244 50.849 -7.629 14.125 1.00 36.07 PROT
ATOM 298 N PHE 245 51.556 -9.312 15.445 1.00 27.87 PROT
ATOM 299 CA PHE 245 52.949 -8.885 15.461 1.00 30.61 PROT
ATOM 300 CB PHE 245 53.784 -9.887 16.253 1.00 20.28 PROT
ATOM 301 CG PHE 245 53.454 -9.922 17.713 1.00 37.23 PROT
ATOM 302 CD1 PHE 245 52.636 -10.917 18.234 1.00 40.93 PROT
ATOM 303 CD2 PHE 245 53.958 -8.959 18.577 1.00 41.60 PROT
ATOM 304 CE1 PHE 245 52.326 -10.953 19.594 1.00 42.54 PROT
ATOM 305 CE2 PHE 245 53.652 -8.989 19.936 1.00 45.84 PROT
ATOM 306 CZ PHE 245 52.835 -9.988 20.443 1.00 33.72 PROT
ATOM 307 C PHE 245 53.549 -8.693 14.068 1.00 38.75 PROT
ATOM 308 O PHE 245 53.794 -9.660 13.337 1.00 48.93 PROT
ATOM 309 N LEU 246 53.789 -7.437 13.704 1.00 41.18 PROT
ATOM 310 CA LEU 246 54.362 -7.124 12.404 1.00 43.43 PROT
ATOM 311 CB LEU 246 54.378 -5.612 12.181 1.00 42.78 PROT
ATOM 312 CG LEU 246 54.535 -5.200 10.718 1.00 49.88 PROT
ATOM 313 CD1 LEU 246 53.528 -4.113 10.365 1.00 40.64 PROT
ATOM 314 CD2 LEU 246 55.966 -4.730 10.485 1.00 48.66 PROT
ATOM 315 C LEU 246 55.777 -7.692 12.250 1.00 42.60 PROT
ATOM 316 O LEU 246 56.677 -7.383 13.028 1.00 45.75 PROT
ATOM 317 N PRO 247 55.977 -8.540 11.233 1.00 50.03 PROT
ATOM 318 CD PRO 247 54.914 -8.924 10.286 1.00 60.17 PROT
ATOM 319 CA PRO 247 57.237 -9.199 10.894 1.00 49.90 PROT
ATOM 320 CB PRO 247 57.181 -9.282 9.369 1.00 59.51 PROT
ATOM 321 CG PRO 247 55.678 -9.244 9.023 1.00 52.86 PROT
ATOM 322 C PRO 247 58.499 -8.494 11.392 1.00 48.85 PROT
ATOM 323 O PRO 247 58.675 -7.295 11.186 1.00 49.28 PROT
ATOM 324 N GLU 248 59.379 -9.261 12.032 1.00 47.62 PROT
ATOM 325 CA GLU 248 60.628 -8.733 12.574 1.00 51.41 PROT
ATOM 326 CB GLU 248 61.266 -9.750 13.522 1.00 44.22 PROT
ATOM 327 C GLU 248 61.623 -8.354 11.490 1.00 53.28 PROT
ATOM 328 O GLU 248 62.815 -8.214 11.765 1.00 62.57 PROT
ATOM 329 N ASP 249 61.146 -8.200 10.258 1.00 56.20 PROT
ATOM 330 CA ASP 249 62.030 -7.818 9.164 1.00 55.88 PROT
ATOM 331 CB ASP 249 62.231 -8.981 8.173 1.00 53.88 PROT

ATOM 332 CG ASP 249 60.928 -9.637 7.739 1.00 54.39 PROT
ATOM 333 OD1 ASP 249 60.578 -10.693 8.310 1.00 57.70 PROT
ATOM 334 OD2 ASP 249 60.264 -9.112 6.819 1.00 45.76 PROT
ATOM 335 C ASP 249 61.539 -6.567 8.437 1.00 54.20 PROT
ATOM 336 O ASP 249 62.119 -6.154 7.429 1.00 55.31 PROT
ATOM 337 N ILE 250 60.469 -5.965 8.954 1.00 46.13 PROT
ATOM 338 CA ILE 250 59.933 -4.735 8.376 1.00 46.12 PROT
ATOM 339 CB ILE 250 58.413 -4.764 8.253 1.00 43.38 PROT
ATOM 340 CG2 ILE 250 57.892 -3.344 8.057 1.00 39.15 PROT
ATOM 341 CG1 ILE 250 58.007 -5.654 7.074 1.00 48.96 PROT
ATOM 342 CD1 ILE 250 56.707 -6.401 7.283 1.00 43.14 PROT
ATOM 343 C ILE 250 60.311 -3.590 9.294 1.00 45.32 PROT
ATOM 344 O ILE 250 60.257 -3.724 10.513 1.00 43.74 PROT
ATOM 345 N GLY 251 60.680 -2.459 8.711 1.00 36.80 PROT
ATOM 346 CA GLY 251 61.091 -1.329 9.521 1.00 39.28 PROT
ATOM 347 C GLY 251 62.370 -1.621 10.305 1.00 44.31 PROT
ATOM 348 O GLY 251 62.538 -1.145 11.428 1.00 51.39 PROT
ATOM 349 N GLN 252 63.277 -2.399 9.715 1.00 55.47 PROT
ATOM 350 CA GLN 252 64.536 -2.745 10.374 1.00 54.24 PROT
ATOM 351 CB GLN 252 64.792 -4.237 10.245 1.00 49.31 PROT
ATOM 352 C GLN 252 65.720 -1.959 9.812 1.00 54.86 PROT
ATOM 353 O GLN 252 65.492 -1.079 8.953 1.00 58.80 PROT
ATOM 354 CB VAL 264 60.887 6.759 5.510 1.00 34.33 PROT
ATOM 355 CG1 VAL 264 59.550 6.086 5.790 1.00 34.34 PROT
ATOM 356 CG2 VAL 264 60.893 8.163 6.080 1.00 20.22 PROT
ATOM 357 C VAL 264 62.053 4.557 5.439 1.00 34.08 PROT
ATOM 358 O VAL 264 62.280 4.466 4.232 1.00 46.39 PROT
ATOM 359 N VAL 264 63.361 6.605 5.966 1.00 21.27 PROT
ATOM 360 CA VAL 264 62.041 5.920 6.122 1.00 29.68 PROT
ATOM 361 N ASP 265 61.809 3.499 6.209 1.00 40.63 PROT
ATOM 362 CA ASP 265 61.796 2.141 5.670 1.00 43.58 PROT
ATOM 363 CB ASP 265 61.243 1.160 6.704 1.00 44.07 PROT
ATOM 364 CG ASP 265 61.179 -0.262 6.185 1.00 49.19 PROT
ATOM 365 OD1 ASP 265 62.223 -0.945 6.175 1.00 57.67 PROT
ATOM 366 OD2 ASP 265 60.082 -0.702 5.789 1.00 54.75 PROT
ATOM 367 C ASP 265 60.956 2.071 4.401 1.00 48.03 PROT
ATOM 368 O ASP 265 61.362 1.458 3.411 1.00 57.44 PROT
ATOM 369 N LEU 266 59.793 2.711 4.436 1.00 40.55 PROT
ATOM 370 CA LEU 266 58.879 2.741 3.295 1.00 45.78 PROT
ATOM 371 CB LEU 266 59.638 2.962 1.977 1.00 45.92 PROT
ATOM 372 CG LEU 266 59.881 4.407 1.506 1.00 48.41 PROT
ATOM 373 CD1 LEU 266 59.934 4.432 -0.007 1.00 32.83 PROT
ATOM 374 CD2 LEU 266 58.787 5.344 2.012 1.00 45.08 PROT
ATOM 375 C LEU 266 58.064 1.462 3.214 1.00 45.45 PROT
ATOM 376 O LEU 266 56.862 1.503 2.949 1.00 42.92 PROT
ATOM 377 N GLU 267 58.712 0.324 3.431 1.00 46.47 PROT

ATOM 378 CA GLU 267 57.986 -0.935 3.415 1.00 44.34 PROT
ATOM 379 CB GLU 267 58.943 -2.123 3.505 1.00 39.42 PROT
ATOM 380 CG GLU 267 58.291 -3.457 3.188 1.00 40.68 PROT
ATOM 381 CD GLU 267 58.929 -4.607 3.943 1.00 63.54 PROT
ATOM 382 OE1 GLU 267 60.103 -4.470 4.361 1.00 68.92 PROT
ATOM 383 OE2 GLU 267 58.258 -5.650 4.120 1.00 66.66 PROT
ATOM 384 C GLU 267 57.106 -0.880 4.655 1.00 41.57 PROT
ATOM 385 O GLU 267 55.991 -1.398 4.673 1.00 48.68 PROT
ATOM 386 N ALA 268 57.620 -0.215 5.686 1.00 39.33 PROT
ATOM 387 CA ALA 268 56.916 -0.057 6.951 1.00 31.62 PROT
ATOM 388 CB ALA 268 57.918 0.134 8.063 1.00 7.56 PROT
ATOM 389 C ALA 268 55.960 1.135 6.888 1.00 25.96 PROT
ATOM 390 O ALA 268 54.786 1.036 7.237 1.00 17.35 PROT
ATOM 391 N PHE 269 56.464 2.274 6.446 1.00 11.34 PROT
ATOM 392 CA PHE 269 55.615 3.453 6.335 1.00 15.72 PROT
ATOM 393 CB PHE 269 56.274 4.474 5.405 1.00 20.08 PROT
ATOM 394 CG PHE 269 55.552 5.788 5.334 1.00 24.67 PROT
ATOM 395 CD1 PHE 269 55.661 6.713 6.369 1.00 15.69 PROT
ATOM 396 CD2 PHE 269 54.772 6.111 4.222 1.00 20.64 PROT
ATOM 397 CE1 PHE 269 55.003 7.942 6.300 1.00 22.55 PROT
ATOM 398 CE2 PHE 269 54.108 7.342 4.143 1.00 19.77 PROT
ATOM 399 CZ PHE 269 54.224 8.257 5.186 1.00 19.27 PROT
ATOM 400 C PHE 269 54.277 3.010 5.754 1.00 19.45 PROT
ATOM 401 O PHE 269 53.212 3.351 6.261 1.00 13.40 PROT
ATOM 402 N SER 270 54.367 2.214 4.692 1.00 43.85 PROT
ATOM 403 CA SER 270 53.217 1.686 3.967 1.00 46.67 PROT
ATOM 404 CB SER 270 53.687 0.669 2.924 1.00 53.60 PROT
ATOM 405 OG SER 270 52.662 0.382 1.988 1.00 68.82 PROT
ATOM 406 C SER 270 52.181 1.039 4.865 1.00 43.32 PROT
ATOM 407 O SER 270 51.024 1.459 4.893 1.00 43.87 PROT
ATOM 408 N HIS 271 52.594 0.009 5.590 1.00 34.59 PROT
ATOM 409 CA HIS 271 51.681 -0.694 6.486 1.00 37.12 PROT
ATOM 410 CB HIS 271 52.441 -1.772 7.266 1.00 46.61 PROT
ATOM 411 CG HIS 271 52.603 -3.056 6.512 1.00 63.99 PROT
ATOM 412 CD2 HIS 271 51.879 -4.201 6.533 1.00 62.06 PROT
ATOM 413 ND1 HIS 271 53.608 -3.256 5.590 1.00 60.86 PROT
ATOM 414 CE1 HIS 271 53.497 -4.467 5.075 1.00 60.70 PROT
ATOM 415 NE2 HIS 271 52.456 -5.061 5.630 1.00 64.10 PROT
ATOM 416 C HIS 271 50.973 0.261 7.459 1.00 36.53 PROT
ATOM 417 O HIS 271 49.744 0.245 7.586 1.00 37.75 PROT
ATOM 418 N PHE 272 51.752 1.099 8.133 1.00 32.81 PROT
ATOM 419 CA PHE 272 51.190 2.038 9.085 1.00 27.77 PROT
ATOM 420 CB PHE 272 52.302 2.886 9.714 1.00 10.49 PROT
ATOM 421 CG PHE 272 53.338 2.086 10.459 1.00 6.98 PROT
ATOM 422 CD1 PHE 272 54.671 2.478 10.449 1.00 4.13 PROT
ATOM 423 CD2 PHE 272 52.978 0.961 11.193 1.00 6.95 PROT

ATOM	424	CE1	PHE	272	55.634	1.764	11.163	1.00	7.86	PROT
ATOM	425	CE2	PHE	272	53.930	0.242	11.909	1.00	6.13	PROT
ATOM	426	CZ	PHE	272	55.263	0.645	11.895	1.00	8.93	PROT
ATOM	427	C	PHE	272	50.168	2.939	8.405	1.00	30.96	PROT
ATOM	428	O	PHE	272	49.071	3.156	8.931	1.00	30.21	PROT
ATOM	429	N	THR	273	50.522	3.452	7.231	1.00	31.55	PROT
ATOM	430	CA	THR	273	49.633	4.343	6.487	1.00	33.39	PROT
ATOM	431	CB	THR	273	50.335	4.912	5.243	1.00	36.80	PROT
ATOM	432	OG1	THR	273	50.649	3.847	4.332	1.00	27.42	PROT
ATOM	433	CG2	THR	273	51.613	5.641	5.656	1.00	32.25	PROT
ATOM	434	C	THR	273	48.350	3.647	6.056	1.00	34.07	PROT
ATOM	435	O	THR	273	47.362	4.294	5.697	1.00	17.11	PROT
ATOM	436	N	LYS	274	48.372	2.321	6.088	1.00	34.47	PROT
ATOM	437	CA	LYS	274	47.196	1.555	5.726	1.00	42.17	PROT
ATOM	438	CB	LYS	274	47.544	0.069	5.615	1.00	40.02	PROT
ATOM	439	C	LYS	274	46.153	1.778	6.818	1.00	41.47	PROT
ATOM	440	O	LYS	274	45.115	2.402	6.584	1.00	47.37	PROT
ATOM	441	N	ILE	275	46.456	1.290	8.019	1.00	34.08	PROT
ATOM	442	CA	ILE	275	45.559	1.403	9.166	1.00	25.49	PROT
ATOM	443	CB	ILE	275	45.991	0.435	10.262	1.00	19.72	PROT
ATOM	444	CG2	ILE	275	46.290	-0.934	9.642	1.00	23.39	PROT
ATOM	445	CG1	ILE	275	47.249	0.958	10.953	1.00	12.96	PROT
ATOM	446	CD1	ILE	275	47.970	-0.103	11.769	1.00	11.07	PROT
ATOM	447	C	ILE	275	45.440	2.805	9.762	1.00	20.03	PROT
ATOM	448	O	ILE	275	44.541	3.081	10.547	1.00	18.98	PROT
ATOM	449	N	ILE	276	46.347	3.694	9.402	1.00	8.88	PROT
ATOM	450	CA	ILE	276	46.268	5.043	9.924	1.00	6.62	PROT
ATOM	451	CB	ILE	276	47.298	5.972	9.261	1.00	21.77	PROT
ATOM	452	CG2	ILE	276	46.894	6.267	7.831	1.00	27.28	PROT
ATOM	453	CG1	ILE	276	47.374	7.288	10.028	1.00	6.75	PROT
ATOM	454	CD1	ILE	276	48.349	7.255	11.153	1.00	15.44	PROT
ATOM	455	C	ILE	276	44.887	5.649	9.697	1.00	12.17	PROT
ATOM	456	O	ILE	276	44.349	6.331	10.565	1.00	29.36	PROT
ATOM	457	N	THR	277	44.303	5.411	8.535	1.00	22.12	PROT
ATOM	458	CA	THR	277	43.007	6.005	8.260	1.00	27.16	PROT
ATOM	459	CB	THR	277	42.532	5.675	6.834	1.00	27.11	PROT
ATOM	460	OG1	THR	277	43.665	5.584	5.955	1.00	22.55	PROT
ATOM	461	CG2	THR	277	41.594	6.763	6.337	1.00	26.98	PROT
ATOM	462	C	THR	277	41.944	5.591	9.270	1.00	25.23	PROT
ATOM	463	O	THR	277	41.271	6.443	9.847	1.00	21.62	PROT
ATOM	464	N	PRO	278	41.769	4.279	9.491	1.00	18.64	PROT
ATOM	465	CD	PRO	278	42.472	3.167	8.832	1.00	9.52	PROT
ATOM	466	CA	PRO	278	40.765	3.803	10.453	1.00	18.48	PROT
ATOM	467	CB	PRO	278	40.907	2.280	10.415	1.00	14.77	PROT
ATOM	468	CG	PRO	278	42.195	2.008	9.738	1.00	7.70	PROT
ATOM	469	C	PRO	278	40.956	4.356	11.870	1.00	25.40	PROT

ATOM 470 O PRO 278 39.983 4.628 12.576 1.00 22.33 PROT
ATOM 471 N ALA 279 42.211 4.507 12.285 1.00 22.14 PROT
ATOM 472 CA ALA 279 42.519 5.038 13.607 1.00 20.26 PROT
ATOM 473 CB ALA 279 44.016 5.033 13.831 1.00 13.33 PROT
ATOM 474 C ALA 279 41.984 6.456 13.699 1.00 16.49 PROT
ATOM 475 O ALA 279 41.222 6.797 14.598 1.00 32.38 PROT
ATOM 476 N ILE 280 42.384 7.286 12.753 1.00 7.56 PROT
ATOM 477 CA ILE 280 41.935 8.666 12.734 1.00 9.96 PROT
ATOM 478 CB ILE 280 42.422 9.380 11.462 1.00 8.46 PROT
ATOM 479 CG2 ILE 280 42.172 10.871 11.581 1.00 2.00 PROT
ATOM 480 CG1 ILE 280 43.901 9.059 11.220 1.00 10.96 PROT
ATOM 481 CD1 ILE 280 44.615 10.036 10.294 1.00 8.54 PROT
ATOM 482 C ILE 280 40.410 8.805 12.805 1.00 15.46 PROT
ATOM 483 O ILE 280 39.887 9.741 13.421 1.00 24.39 PROT
ATOM 484 N THR 281 39.692 7.883 12.172 1.00 24.18 PROT
ATOM 485 CA THR 281 38.238 7.962 12.153 1.00 24.77 PROT
ATOM 486 CB THR 281 37.650 6.952 11.145 1.00 33.90 PROT
ATOM 487 OG1 THR 281 38.607 6.711 10.108 1.00 34.62 PROT
ATOM 488 CG2 THR 281 36.379 7.506 10.513 1.00 39.80 PROT
ATOM 489 C THR 281 37.655 7.726 13.535 1.00 23.39 PROT
ATOM 490 O THR 281 36.733 8.422 13.960 1.00 19.51 PROT
ATOM 491 N ARG 282 38.213 6.743 14.234 1.00 16.90 PROT
ATOM 492 CA ARG 282 37.781 6.404 15.583 1.00 12.29 PROT
ATOM 493 CB ARG 282 38.641 5.260 16.115 1.00 5.36 PROT
ATOM 494 CG ARG 282 37.936 3.926 16.136 1.00 17.05 PROT
ATOM 495 CD ARG 282 38.296 3.095 14.942 1.00 18.41 PROT
ATOM 496 NE ARG 282 39.622 2.475 15.011 1.00 35.77 PROT
ATOM 497 CZ ARG 282 40.454 2.501 16.055 1.00 36.80 PROT
ATOM 498 NH1 ARG 282 41.629 1.888 15.967 1.00 35.96 PROT
ATOM 499 NH2 ARG 282 40.134 3.120 17.183 1.00 25.20 PROT
ATOM 500 C ARG 282 37.863 7.626 16.520 1.00 16.75 PROT
ATOM 501 O ARG 282 37.078 7.758 17.456 1.00 22.98 PROT
ATOM 502 N VAL 283 38.813 8.518 16.268 1.00 11.92 PROT
ATOM 503 CA VAL 283 38.937 9.719 17.083 1.00 14.68 PROT
ATOM 504 CB VAL 283 40.191 10.541 16.696 1.00 23.35 PROT
ATOM 505 CG1 VAL 283 40.467 11.593 17.752 1.00 11.98 PROT
ATOM 506 CG2 VAL 283 41.396 9.621 16.526 1.00 20.41 PROT
ATOM 507 C VAL 283 37.705 10.580 16.833 1.00 12.72 PROT
ATOM 508 O VAL 283 36.965 10.929 17.752 1.00 20.37 PROT
ATOM 509 N VAL 284 37.503 10.920 15.567 1.00 18.28 PROT
ATOM 510 CA VAL 284 36.369 11.727 15.150 1.00 16.98 PROT
ATOM 511 CB VAL 284 36.251 11.765 13.602 1.00 27.40 PROT
ATOM 512 CG1 VAL 284 35.434 12.973 13.172 1.00 19.30 PROT
ATOM 513 CG2 VAL 284 37.649 11.794 12.959 1.00 16.94 PROT
ATOM 514 C VAL 284 35.113 11.093 15.715 1.00 14.89 PROT
ATOM 515 O VAL 284 34.233 11.781 16.219 1.00 10.93 PROT

ATOM 516 N ASP 285 35.046 9.768 15.623 1.00 10.68 PROT
ATOM 517 CA ASP 285 33.898 9.022 16.114 1.00 20.76 PROT
ATOM 518 CB ASP 285 34.079 7.518 15.874 1.00 22.99 PROT
ATOM 519 CG ASP 285 33.985 7.130 14.397 1.00 30.01 PROT
ATOM 520 OD1 ASP 285 33.185 7.735 13.648 1.00 18.56 PROT
ATOM 521 OD2 ASP 285 34.720 6.202 13.993 1.00 27.74 PROT
ATOM 522 C ASP 285 33.734 9.274 17.604 1.00 26.87 PROT
ATOM 523 O ASP 285 32.609 9.349 18.103 1.00 39.89 PROT
ATOM 524 N PHE 286 34.861 9.405 18.308 1.00 25.45 PROT
ATOM 525 CA PHE 286 34.862 9.654 19.746 1.00 15.66 PROT
ATOM 526 CB PHE 286 36.284 9.533 20.305 1.00 7.30 PROT
ATOM 527 CG PHE 286 36.454 10.104 21.703 1.00 17.92 PROT
ATOM 528 CD1 PHE 286 35.848 9.499 22.805 1.00 19.35 PROT
ATOM 529 CD2 PHE 286 37.229 11.245 21.920 1.00 19.24 PROT
ATOM 530 CE1 PHE 286 36.014 10.021 24.087 1.00 9.94 PROT
ATOM 531 CE2 PHE 286 37.395 11.769 23.207 1.00 11.33 PROT
ATOM 532 CZ PHE 286 36.786 11.154 24.283 1.00 2.00 PROT
ATOM 533 C PHE 286 34.313 11.043 20.030 1.00 17.67 PROT
ATOM 534 O PHE 286 33.367 11.201 20.797 1.00 14.36 PROT
ATOM 535 N ALA 287 34.905 12.056 19.410 1.00 12.57 PROT
ATOM 536 CA ALA 287 34.443 13.426 19.622 1.00 12.49 PROT
ATOM 537 CB ALA 287 35.250 14.386 18.759 1.00 23.54 PROT
ATOM 538 C ALA 287 32.954 13.559 19.307 1.00 9.21 PROT
ATOM 539 O ALA 287 32.209 14.205 20.043 1.00 11.68 PROT
ATOM 540 N LYS 288 32.540 12.929 18.209 1.00 16.43 PROT
ATOM 541 CA LYS 288 31.157 12.944 17.736 1.00 16.10 PROT
ATOM 542 CB LYS 288 31.003 11.977 16.569 1.00 13.15 PROT
ATOM 543 CG LYS 288 31.117 12.636 15.219 1.00 25.55 PROT
ATOM 544 CD LYS 288 30.480 11.779 14.136 1.00 32.95 PROT
ATOM 545 CE LYS 288 31.279 10.507 13.900 1.00 34.58 PROT
ATOM 546 NZ LYS 288 30.755 9.721 12.748 1.00 36.93 PROT
ATOM 547 C LYS 288 30.154 12.569 18.813 1.00 18.87 PROT
ATOM 548 O LYS 288 29.078 13.171 18.917 1.00 12.83 PROT
ATOM 549 N LYS 289 30.525 11.574 19.614 1.00 11.81 PROT
ATOM 550 CA LYS 289 29.674 11.067 20.681 1.00 15.53 PROT
ATOM 551 CB LYS 289 30.070 9.631 21.011 1.00 15.88 PROT
ATOM 552 CG LYS 289 29.767 8.645 19.911 1.00 20.93 PROT
ATOM 553 CD LYS 289 29.140 7.382 20.471 1.00 28.97 PROT
ATOM 554 CE LYS 289 29.951 6.167 20.071 1.00 25.06 PROT
ATOM 555 NZ LYS 289 30.043 6.060 18.590 1.00 39.19 PROT
ATOM 556 C LYS 289 29.660 11.884 21.969 1.00 15.95 PROT
ATOM 557 O LYS 289 29.205 11.398 23.001 1.00 28.53 PROT
ATOM 558 N LEU 290 30.151 13.116 21.919 1.00 10.13 PROT
ATOM 559 CA LEU 290 30.155 13.959 23.104 1.00 7.83 PROT
ATOM 560 CB LEU 290 31.588 14.300 23.532 1.00 14.46 PROT
ATOM 561 CG LEU 290 32.676 13.228 23.542 1.00 11.22 PROT

ATOM 562 CD1 LEU 290 34.016 13.900 23.678 1.00 3.02 PROT
ATOM 563 CD2 LEU 290 32.449 12.257 24.686 1.00 9.39 PROT
ATOM 564 C LEU 290 29.410 15.259 22.849 1.00 7.59 PROT
ATOM 565 O LEU 290 29.942 16.148 22.196 1.00 11.01 PROT
ATOM 566 N PRO 291 28.169 15.381 23.365 1.00 14.33 PROT
ATOM 567 CD PRO 291 27.515 14.291 24.109 1.00 18.52 PROT
ATOM 568 CA PRO 291 27.290 16.556 23.240 1.00 6.61 PROT
ATOM 569 CB PRO 291 26.296 16.400 24.384 1.00 11.95 PROT
ATOM 570 CG PRO 291 26.496 15.004 24.929 1.00 20.22 PROT
ATOM 571 C PRO 291 28.029 17.885 23.332 1.00 14.74 PROT
ATOM 572 O PRO 291 27.795 18.792 22.537 1.00 26.09 PROT
ATOM 573 N MET 292 28.917 18.002 24.315 1.00 24.06 PROT
ATOM 574 CA MET 292 29.697 19.225 24.494 1.00 25.33 PROT
ATOM 575 CB MET 292 30.706 19.046 25.628 1.00 26.65 PROT
ATOM 576 CG MET 292 30.222 19.581 26.962 1.00 26.97 PROT
ATOM 577 SD MET 292 31.153 18.943 28.362 1.00 29.01 PROT
ATOM 578 CE MET 292 30.315 17.438 28.685 1.00 17.91 PROT
ATOM 579 C MET 292 30.430 19.588 23.204 1.00 23.01 PROT
ATOM 580 O MET 292 30.478 20.747 22.813 1.00 31.98 PROT
ATOM 581 N PHE 293 31.007 18.591 22.547 1.00 23.44 PROT
ATOM 582 CA PHE 293 31.724 18.819 21.297 1.00 24.83 PROT
ATOM 583 CB PHE 293 32.389 17.529 20.830 1.00 15.05 PROT
ATOM 584 CG PHE 293 33.214 17.686 19.594 1.00 13.55 PROT
ATOM 585 CD1 PHE 293 34.376 18.446 19.614 1.00 19.86 PROT
ATOM 586 CD2 PHE 293 32.867 17.024 18.425 1.00 22.99 PROT
ATOM 587 CE1 PHE 293 35.184 18.540 18.495 1.00 18.15 PROT
ATOM 588 CE2 PHE 293 33.671 17.108 17.291 1.00 20.83 PROT
ATOM 589 CZ PHE 293 34.831 17.866 17.328 1.00 22.53 PROT
ATOM 590 C PHE 293 30.759 19.291 20.222 1.00 27.26 PROT
ATOM 591 O PHE 293 30.971 20.319 19.577 1.00 28.69 PROT
ATOM 592 N CYS 294 29.689 18.528 20.040 1.00 29.92 PROT
ATOM 593 CA CYS 294 28.700 18.855 19.037 1.00 35.54 PROT
ATOM 594 CB CYS 294 27.540 17.860 19.106 1.00 19.11 PROT
ATOM 595 SG CYS 294 27.843 16.358 18.132 1.00 35.66 PROT
ATOM 596 C CYS 294 28.203 20.291 19.171 1.00 38.84 PROT
ATOM 597 O CYS 294 28.072 20.995 18.169 1.00 45.94 PROT
ATOM 598 N GLU 295 27.959 20.739 20.401 1.00 27.34 PROT
ATOM 599 CA GLU 295 27.472 22.097 20.632 1.00 21.06 PROT
ATOM 600 CB GLU 295 27.178 22.306 22.121 1.00 29.78 PROT
ATOM 601 C GLU 295 28.458 23.158 20.128 1.00 23.67 PROT
ATOM 602 O GLU 295 28.228 24.357 20.272 1.00 29.89 PROT
ATOM 603 N LEU 296 29.551 22.715 19.522 1.00 21.46 PROT
ATOM 604 CA LEU 296 30.545 23.642 19.005 1.00 26.35 PROT
ATOM 605 CB LEU 296 31.947 23.128 19.330 1.00 25.17 PROT
ATOM 606 CG LEU 296 32.419 23.157 20.778 1.00 13.78 PROT
ATOM 607 CD1 LEU 296 33.593 22.217 20.931 1.00 23.61 PROT

ATOM 608 CD2 LEU 296 32.814 24.564 21.160 1.00 13.82 PROT
ATOM 609 C LEU 296 30.415 23.783 17.493 1.00 31.88 PROT
ATOM 610 O LEU 296 29.890 22.890 16.827 1.00 45.99 PROT
ATOM 611 N PRO 297 30.884 24.912 16.932 1.00 27.00 PROT
ATOM 612 CD PRO 297 31.423 26.037 17.708 1.00 36.12 PROT
ATOM 613 CA PRO 297 30.856 25.222 15.492 1.00 22.30 PROT
ATOM 614 CB PRO 297 31.182 26.716 15.424 1.00 16.06 PROT
ATOM 615 CG PRO 297 31.107 27.208 16.827 1.00 42.41 PROT
ATOM 616 C PRO 297 31.838 24.413 14.642 1.00 28.19 PROT
ATOM 617 O PRO 297 32.983 24.189 15.036 1.00 39.38 PROT
ATOM 618 N CYS 298 31.371 24.014 13.457 1.00 35.37 PROT
ATOM 619 CA CYS 298 32.134 23.233 12.481 1.00 32.41 PROT
ATOM 620 CB CYS 298 31.416 23.289 11.112 1.00 40.85 PROT
ATOM 621 SG CYS 298 32.431 23.615 9.614 1.00 61.24 PROT
ATOM 622 C CYS 298 33.596 23.654 12.352 1.00 31.68 PROT
ATOM 623 O CYS 298 34.474 22.804 12.225 1.00 28.49 PROT
ATOM 624 N GLU 299 33.869 24.954 12.393 1.00 29.93 PROT
ATOM 625 CA GLU 299 35.253 25.407 12.278 1.00 36.38 PROT
ATOM 626 CB GLU 299 35.346 26.931 12.203 1.00 32.78 PROT
ATOM 627 CG GLU 299 34.467 27.546 11.167 1.00 43.40 PROT
ATOM 628 CD GLU 299 33.038 27.593 11.625 1.00 58.19 PROT
ATOM 629 OE1 GLU 299 32.723 28.457 12.474 1.00 67.37 PROT
ATOM 630 OE2 GLU 299 32.237 26.762 11.143 1.00 54.02 PROT
ATOM 631 C GLU 299 36.057 24.932 13.475 1.00 38.89 PROT
ATOM 632 O GLU 299 37.129 24.342 13.316 1.00 48.67 PROT
ATOM 633 N ASP 300 35.528 25.186 14.671 1.00 36.49 PROT
ATOM 634 CA ASP 300 36.201 24.805 15.906 1.00 29.96 PROT
ATOM 635 CB ASP 300 35.455 25.391 17.111 1.00 5.33 PROT
ATOM 636 CG ASP 300 35.830 26.853 17.378 1.00 19.10 PROT
ATOM 637 OD1 ASP 300 36.491 27.473 16.518 1.00 27.28 PROT
ATOM 638 OD2 ASP 300 35.470 27.396 18.444 1.00 23.55 PROT
ATOM 639 C ASP 300 36.380 23.294 16.054 1.00 25.88 PROT
ATOM 640 O ASP 300 37.441 22.845 16.484 1.00 19.03 PROT
ATOM 641 N GLN 301 35.360 22.516 15.689 1.00 6.29 PROT
ATOM 642 CA GLN 301 35.432 21.055 15.769 1.00 9.51 PROT
ATOM 643 CB GLN 301 34.170 20.421 15.183 1.00 18.27 PROT
ATOM 644 CG GLN 301 32.886 20.813 15.875 1.00 28.72 PROT
ATOM 645 CD GLN 301 31.676 20.155 15.243 1.00 17.63 PROT
ATOM 646 OE1 GLN 301 31.689 19.823 14.060 1.00 30.65 PROT
ATOM 647 NE2 GLN 301 30.625 19.965 16.027 1.00 30.44 PROT
ATOM 648 C GLN 301 36.646 20.491 15.020 1.00 15.48 PROT
ATOM 649 O GLN 301 37.333 19.584 15.500 1.00 21.96 PROT
ATOM 650 N ILE 302 36.891 21.014 13.825 1.00 24.00 PROT
ATOM 651 CA ILE 302 38.011 20.555 13.026 1.00 28.84 PROT
ATOM 652 CB ILE 302 37.930 21.112 11.607 1.00 33.13 PROT
ATOM 653 CG2 ILE 302 39.147 20.690 10.813 1.00 37.90 PROT

ATOM 654 CG1 ILE 302 36.656 20.610 10.941 1.00 29.63 PROT
ATOM 655 CD1 ILE 302 36.296 21.356 9.698 1.00 32.99 PROT
ATOM 656 C ILE 302 39.308 21.014 13.670 1.00 28.73 PROT
ATOM 657 O ILE 302 40.219 20.219 13.895 1.00 36.02 PROT
ATOM 658 N ILE 303 39.396 22.304 13.968 1.00 25.04 PROT
ATOM 659 CA ILE 303 40.590 22.817 14.603 1.00 24.27 PROT
ATOM 660 CB ILE 303 40.414 24.270 15.054 1.00 20.89 PROT
ATOM 661 CG2 ILE 303 41.686 24.740 15.744 1.00 32.38 PROT
ATOM 662 CG1 ILE 303 40.079 25.158 13.849 1.00 18.88 PROT
ATOM 663 CD1 ILE 303 40.298 26.648 14.079 1.00 5.31 PROT
ATOM 664 C ILE 303 40.861 21.948 15.825 1.00 26.92 PROT
ATOM 665 O ILE 303 41.963 21.440 15.997 1.00 31.32 PROT
ATOM 666 N LEU 304 39.843 21.763 16.659 1.00 11.00 PROT
ATOM 667 CA LEU 304 39.983 20.953 17.854 1.00 7.21 PROT
ATOM 668 CB LEU 304 38.663 20.886 18.613 1.00 2.00 PROT
ATOM 669 CG LEU 304 38.633 21.511 20.012 1.00 8.04 PROT
ATOM 670 CD1 LEU 304 39.383 22.812 19.997 1.00 2.00 PROT
ATOM 671 CD2 LEU 304 37.188 21.729 20.472 1.00 4.99 PROT
ATOM 672 C LEU 304 40.441 19.554 17.507 1.00 4.64 PROT
ATOM 673 O LEU 304 41.368 19.032 18.119 1.00 14.88 PROT
ATOM 674 N LEU 305 39.807 18.953 16.510 1.00 4.55 PROT
ATOM 675 CA LEU 305 40.140 17.590 16.093 1.00 7.03 PROT
ATOM 676 CB LEU 305 39.099 17.098 15.104 1.00 3.70 PROT
ATOM 677 CG LEU 305 38.164 16.054 15.691 1.00 10.31 PROT
ATOM 678 CD1 LEU 305 36.744 16.340 15.245 1.00 2.00 PROT
ATOM 679 CD2 LEU 305 38.629 14.665 15.260 1.00 9.42 PROT
ATOM 680 C LEU 305 41.527 17.418 15.483 1.00 10.17 PROT
ATOM 681 O LEU 305 42.174 16.374 15.651 1.00 7.58 PROT
ATOM 682 N LYS 306 41.975 18.442 14.765 1.00 9.98 PROT
ATOM 683 CA LYS 306 43.283 18.408 14.127 1.00 9.14 PROT
ATOM 684 CB LYS 306 43.409 19.558 13.131 1.00 18.85 PROT
ATOM 685 CG LYS 306 42.815 19.270 11.763 1.00 25.44 PROT
ATOM 686 CD LYS 306 42.198 20.529 11.178 1.00 29.07 PROT
ATOM 687 CE LYS 306 42.698 20.808 9.774 1.00 37.81 PROT
ATOM 688 NZ LYS 306 43.867 19.964 9.403 1.00 30.48 PROT
ATOM 689 C LYS 306 44.376 18.522 15.175 1.00 7.31 PROT
ATOM 690 O LYS 306 45.439 17.919 15.048 1.00 16.95 PROT
ATOM 691 N GLY 307 44.097 19.295 16.218 1.00 12.67 PROT
ATOM 692 CA GLY 307 45.062 19.484 17.279 1.00 7.25 PROT
ATOM 693 C GLY 307 45.297 18.269 18.150 1.00 15.08 PROT
ATOM 694 O GLY 307 46.441 17.972 18.488 1.00 20.11 PROT
ATOM 695 N CYS 308 44.225 17.552 18.481 1.00 8.29 PROT
ATOM 696 CA CYS 308 44.286 16.380 19.364 1.00 3.44 PROT
ATOM 697 CB CYS 308 43.097 16.402 20.326 1.00 14.26 PROT
ATOM 698 SG CYS 308 41.539 15.750 19.634 1.00 21.83 PROT
ATOM 699 C CYS 308 44.344 14.995 18.738 1.00 8.37 PROT

ATOM 700 O CYS 308 44.502 13.997 19.453 1.00 10.98 PROT
ATOM 701 N CYS 309 44.202 14.916 17.420 1.00 10.83 PROT
ATOM 702 CA CYS 309 44.236 13.625 16.752 1.00 3.22 PROT
ATOM 703 CB CYS 309 44.240 13.831 15.240 1.00 15.79 PROT
ATOM 704 SG CYS 309 43.683 12.402 14.319 1.00 25.54 PROT
ATOM 705 C- CYS 309 45.439 12.767 17.193 1.00 2.00 PROT
ATOM 706 O CYS 309 45.251 11.722 17.807 1.00 12.28 PROT
ATOM 707 N MET 310 46.663 13.205 16.900 1.00 2.00 PROT
ATOM 708 CA MET 310 47.858 12.446 17.286 1.00 2.00 PROT
ATOM 709 CB MET 310 49.122 13.171 16.860 1.00 2.00 PROT
ATOM 710 CG MET 310 49.975 12.422 15.880 1.00 5.92 PROT
ATOM 711 SD MET 310 50.481 10.805 16.368 1.00 22.47 PROT
ATOM 712 CE MET 310 52.140 11.112 16.808 1.00 20.84 PROT
ATOM 713 C MET 310 47.941 12.239 18.793 1.00 11.95 PROT
ATOM 714 O MET 310 48.455 11.220 19.270 1.00 15.53 PROT
ATOM 715 N GLU 311 47.463 13.225 19.542 1.00 6.79 PROT
ATOM 716 CA GLU 311 47.493 13.139 20.979 1.00 2.00 PROT
ATOM 717 CB GLU 311 46.932 14.427 21.581 1.00 6.42 PROT
ATOM 718 CG GLU 311 47.880 15.619 21.436 1.00 8.40 PROT
ATOM 719 CD GLU 311 47.236 16.940 21.820 1.00 14.10 PROT
ATOM 720 OE1 GLU 311 46.157 16.895 22.434 1.00 16.54 PROT
ATOM 721 OE2 GLU 311 47.795 18.020 21.515 1.00 4.09 PROT
ATOM 722 C GLU 311 46.683 11.923 21.406 1.00 7.80 PROT
ATOM 723 O GLU 311 47.195 11.026 22.067 1.00 14.07 PROT
ATOM 724 N ILE 312 45.425 11.873 21.001 1.00 2.00 PROT
ATOM 725 CA ILE 312 44.574 10.752 21.371 1.00 3.60 PROT
ATOM 726 CB ILE 312 43.114 11.013 20.947 1.00 2.00 PROT
ATOM 727 CG2 ILE 312 42.277 9.769 21.145 1.00 2.00 PROT
ATOM 728 CG1 ILE 312 42.579 12.221 21.727 1.00 2.00 PROT
ATOM 729 CD1 ILE 312 41.118 12.555 21.495 1.00 2.00 PROT
ATOM 730 C ILE 312 45.049 9.437 20.760 1.00 8.32 PROT
ATOM 731 O ILE 312 44.918 8.373 21.370 1.00 5.58 PROT
ATOM 732 N MET 313 45.615 9.501 19.563 1.00 3.98 PROT
ATOM 733 CA MET 313 46.054 8.282 18.905 1.00 8.91 PROT
ATOM 734 CB MET 313 46.455 8.572 17.462 1.00 25.71 PROT
ATOM 735 CG MET 313 45.430 8.111 16.431 1.00 22.86 PROT
ATOM 736 SD MET 313 45.955 8.430 14.736 1.00 20.60 PROT
ATOM 737 CE MET 313 45.412 10.055 14.534 1.00 14.95 PROT
ATOM 738 C MET 313 47.211 7.634 19.635 1.00 12.95 PROT
ATOM 739 O MET 313 47.213 6.426 19.857 1.00 22.09 PROT
ATOM 740 N SER 314 48.190 8.442 20.021 1.00 10.79 PROT
ATOM 741 CA SER 314 49.354 7.935 20.719 1.00 2.00 PROT
ATOM 742 CB SER 314 50.399 9.042 20.816 1.00 7.24 PROT
ATOM 743 OG SER 314 50.453 9.815 19.619 1.00 10.89 PROT
ATOM 744 C SER 314 48.991 7.399 22.105 1.00 8.64 PROT
ATOM 745 O SER 314 49.559 6.392 22.558 1.00 5.72 PROT

ATOM	746	N	LEU	315	48.050	8.062	22.782	1.00	2.00	PROT
ATOM	747	CA	LEU	315	47.628	7.605	24.104	1.00	2.00	PROT
ATOM	748	CB	LEU	315	46.521	8.502	24.671	1.00	2.95	PROT
ATOM	749	CG	LEU	315	45.831	8.096	25.992	1.00	2.00	PROT
ATOM	750	CD1	LEU	315	46.876	7.845	27.072	1.00	2.54	PROT
ATOM	751	CD2	LEU	315	44.865	9.182	26.444	1.00	2.00	PROT
ATOM	752	C	LEU	315	47.107	6.182	23.945	1.00	3.25	PROT
ATOM	753	O	LEU	315	47.568	5.253	24.603	1.00	2.00	PROT
ATOM	754	N	ARG	316	46.157	6.010	23.039	1.00	7.28	PROT
ATOM	755	CA	ARG	316	45.588	4.691	22.808	1.00	13.31	PROT
ATOM	756	CB	ARG	316	44.551	4.758	21.693	1.00	11.11	PROT
ATOM	757	CG	ARG	316	43.545	5.872	21.887	1.00	10.55	PROT
ATOM	758	CD	ARG	316	42.354	5.639	21.012	1.00	10.09	PROT
ATOM	759	NE	ARG	316	41.131	6.149	21.605	1.00	12.29	PROT
ATOM	760	CZ	ARG	316	39.955	6.127	20.994	1.00	6.99	PROT
ATOM	761	NH1	ARG	316	38.880	6.608	21.595	1.00	19.32	PROT
ATOM	762	NH2	ARG	316	39.853	5.619	19.778	1.00	17.16	PROT
ATOM	763	C	ARG	316	46.666	3.686	22.458	1.00	10.10	PROT
ATOM	764	O	ARG	316	46.549	2.508	22.753	1.00	14.94	PROT
ATOM	765	N	ALA	317	47.723	4.148	21.819	1.00	6.51	PROT
ATOM	766	CA	ALA	317	48.801	3.243	21.474	1.00	11.04	PROT
ATOM	767	CB	ALA	317	49.749	3.902	20.487	1.00	16.13	PROT
ATOM	768	C	ALA	317	49.539	2.910	22.753	1.00	12.70	PROT
ATOM	769	O	ALA	317	49.822	1.755	23.033	1.00	23.09	PROT
ATOM	770	N	ALA	318	49.832	3.943	23.534	1.00	14.79	PROT
ATOM	771	CA	ALA	318	50.567	3.779	24.776	1.00	8.38	PROT
ATOM	772	CB	ALA	318	50.727	5.122	25.448	1.00	11.75	PROT
ATOM	773	C	ALA	318	49.941	2.786	25.741	1.00	10.30	PROT
ATOM	774	O	ALA	318	50.585	1.824	26.165	1.00	8.48	PROT
ATOM	775	N	VAL	319	48.680	3.011	26.083	1.00	7.87	PROT
ATOM	776	CA	VAL	319	48.002	2.131	27.027	1.00	9.64	PROT
ATOM	777	CB	VAL	319	46.579	2.622	27.334	1.00	2.57	PROT
ATOM	778	CG1	VAL	319	46.644	3.929	28.127	1.00	5.09	PROT
ATOM	779	CG2	VAL	319	45.807	2.823	26.043	1.00	5.15	PROT
ATOM	780	C	VAL	319	47.930	0.695	26.541	1.00	11.68	PROT
ATOM	781	O	VAL	319	47.440	-0.171	27.254	1.00	16.32	PROT
ATOM	782	N	ARG	320	48.415	0.444	25.329	1.00	16.40	PROT
ATOM	783	CA	ARG	320	48.405	-0.902	24.767	1.00	13.20	PROT
ATOM	784	CB	ARG	320	47.736	-0.918	23.393	1.00	2.00	PROT
ATOM	785	CG	ARG	320	46.310	-0.405	23.420	1.00	14.07	PROT
ATOM	786	CD	ARG	320	45.283	-1.460	23.035	1.00	19.69	PROT
ATOM	787	NE	ARG	320	44.168	-0.868	22.292	1.00	36.52	PROT
ATOM	788	CZ	ARG	320	42.912	-1.313	22.322	1.00	47.43	PROT
ATOM	789	NH1	ARG	320	41.966	-0.705	21.609	1.00	43.57	PROT
ATOM	790	NH2	ARG	320	42.596	-2.367	23.061	1.00	49.93	PROT
ATOM	791	C	ARG	320	49.835	-1.391	24.662	1.00	15.45	PROT

ATOM 792 O ARG 320 50.167 -2.218 23.809 1.00 24.78 PROT
ATOM 793 N TYR 321 50.684 -0.860 25.537 1.00 13.68 PROT
ATOM 794 CA TYR 321 52.085 -1.258 25.572 1.00 18.80 PROT
ATOM 795 CB TYR 321 52.925 -0.208 26.295 1.00 9.64 PROT
ATOM 796 CG TYR 321 54.313 -0.685 26.622 1.00 11.20 PROT
ATOM 797 CD1 TYR 321 55.211 -1.005 25.612 1.00 2.00 PROT
ATOM 798 CE1 TYR 321 56.483 -1.461 25.906 1.00 9.63 PROT
ATOM 799 CD2 TYR 321 54.727 -0.834 27.943 1.00 18.93 PROT
ATOM 800 CE2 TYR 321 56.003 -1.293 28.250 1.00 19.49 PROT
ATOM 801 CZ TYR 321 56.874 -1.604 27.225 1.00 14.75 PROT
ATOM 802 OH TYR 321 58.137 -2.053 27.518 1.00 22.96 PROT
ATOM 803 C TYR 321 52.209 -2.607 26.287 1.00 19.74 PROT
ATOM 804 O TYR 321 51.483 -2.889 27.242 1.00 31.56 PROT
ATOM 805 N ASP 322 53.136 -3.435 25.823 1.00 26.35 PROT
ATOM 806 CA ASP 322 53.346 -4.759 26.392 1.00 22.38 PROT
ATOM 807 CB ASP 322 52.982 -5.814 25.353 1.00 33.63 PROT
ATOM 808 CG ASP 322 52.601 -7.128 25.970 1.00 40.70 PROT
ATOM 809 OD1 ASP 322 51.539 -7.658 25.591 1.00 48.18 PROT
ATOM 810 OD2 ASP 322 53.358 -7.628 26.826 1.00 38.91 PROT
ATOM 811 C ASP 322 54.800 -4.928 26.776 1.00 23.51 PROT
ATOM 812 O ASP 322 55.683 -4.844 25.924 1.00 37.80 PROT
ATOM 813 N PRO 323 55.076 -5.160 28.066 1.00 24.06 PROT
ATOM 814 CD PRO 323 54.130 -5.258 29.187 1.00 19.35 PROT
ATOM 815 CA PRO 323 56.462 -5.339 28.507 1.00 23.60 PROT
ATOM 816 CB PRO 323 56.390 -5.121 30.007 1.00 3.90 PROT
ATOM 817 CG PRO 323 55.031 -5.570 30.360 1.00 14.06 PROT
ATOM 818 C PRO 323 56.949 -6.736 28.151 1.00 21.79 PROT
ATOM 819 O PRO 323 58.149 -7.003 28.119 1.00 27.28 PROT
ATOM 820 N GLU 324 56.009 -7.633 27.889 1.00 37.63 PROT
ATOM 821 CA GLU 324 56.366 -8.993 27.524 1.00 42.63 PROT
ATOM 822 CB GLU 324 55.133 -9.885 27.551 1.00 37.58 PROT
ATOM 823 C GLU 324 56.971 -8.956 26.124 1.00 43.28 PROT
ATOM 824 O GLU 324 58.154 -9.239 25.938 1.00 43.14 PROT
ATOM 825 N SER 325 56.153 -8.586 25.142 1.00 31.72 PROT
ATOM 826 CA SER 325 56.607 -8.508 23.765 1.00 30.34 PROT
ATOM 827 CB SER 325 55.413 -8.522 22.814 1.00 17.63 PROT
ATOM 828 OG SER 325 54.356 -7.729 23.315 1.00 31.90 PROT
ATOM 829 C SER 325 57.441 -7.257 23.519 1.00 31.94 PROT
ATOM 830 O SER 325 58.146 -7.169 22.513 1.00 45.47 PROT
ATOM 831 N GLU 326 57.359 -6.289 24.429 1.00 31.10 PROT
ATOM 832 CA GLU 326 58.119 -5.050 24.281 1.00 31.43 PROT
ATOM 833 CB GLU 326 59.598 -5.382 24.091 1.00 30.39 PROT
ATOM 834 CG GLU 326 60.552 -4.342 24.612 1.00 35.00 PROT
ATOM 835 CD GLU 326 61.738 -4.965 25.304 1.00 29.12 PROT
ATOM 836 OE1 GLU 326 61.525 -5.579 26.370 1.00 39.21 PROT
ATOM 837 OE2 GLU 326 62.872 -4.844 24.788 1.00 29.11 PROT

ATOM 838 C GLU 326 57.605 -4.283 23.063 1.00 28.37 PROT
ATOM 839 O GLU 326 58.382 -3.677 22.321 1.00 26.51 PROT
ATOM 840 N THR 327 56.290 -4.301 22.873 1.00 23.71 PROT
ATOM 841 CA THR 327 55.674 -3.648 21.720 1.00 22.11 PROT
ATOM 842 CB THR 327 55.298 -4.705 20.652 1.00 28.08 PROT
ATOM 843 OG1 THR 327 54.226 -5.524 21.145 1.00 16.87 PROT
ATOM 844 CG2 THR 327 56.494 -5.597 20.340 1.00 24.03 PROT
ATOM 845 C THR 327 54.420 -2.824 22.046 1.00 22.42 PROT
ATOM 846 O THR 327 53.928 -2.830 23.172 1.00 17.50 PROT
ATOM 847 N LEU 328 53.914 -2.122 21.038 1.00 17.28 PROT
ATOM 848 CA LEU 328 52.728 -1.285 21.171 1.00 14.83 PROT
ATOM 849 CB LEU 328 53.065 0.157 20.806 1.00 15.27 PROT
ATOM 850 CG LEU 328 53.693 1.036 21.879 1.00 10.50 PROT
ATOM 851 CD1 LEU 328 54.137 2.336 21.254 1.00 16.75 PROT
ATOM 852 CD2 LEU 328 52.682 1.285 22.979 1.00 20.19 PROT
ATOM 853 C LEU 328 51.687 -1.804 20.198 1.00 18.16 PROT
ATOM 854 O LEU 328 52.035 -2.508 19.254 1.00 23.88 PROT
ATOM 855 N THR 329 50.421 -1.450 20.402 1.00 9.40 PROT
ATOM 856 CA THR 329 49.389 -1.920 19.495 1.00 8.26 PROT
ATOM 857 CB THR 329 48.460 -2.888 20.199 1.00 8.67 PROT
ATOM 858 OG1 THR 329 49.213 -4.052 20.577 1.00 13.23 PROT
ATOM 859 CG2 THR 329 47.308 -3.289 19.270 1.00 2.00 PROT
ATOM 860 C THR 329 48.569 -0.841 18.800 1.00 16.65 PROT
ATOM 861 O THR 329 47.726 -0.158 19.406 1.00 17.20 PROT
ATOM 862 N LEU 330 48.808 -0.725 17.495 1.00 21.56 PROT
ATOM 863 CA LEU 330 48.138 0.258 16.655 1.00 20.95 PROT
ATOM 864 CB LEU 330 49.106 0.676 15.539 1.00 17.36 PROT
ATOM 865 CG LEU 330 50.570 0.797 16.028 1.00 12.86 PROT
ATOM 866 CD1 LEU 330 51.531 0.521 14.898 1.00 10.10 PROT
ATOM 867 CD2 LEU 330 50.830 2.180 16.600 1.00 2.00 PROT
ATOM 868 C LEU 330 46.803 -0.258 16.097 1.00 21.35 PROT
ATOM 869 O LEU 330 46.655 -1.444 15.791 1.00 21.93 PROT
ATOM 870 N ASN 331 45.834 0.648 15.987 1.00 27.76 PROT
ATOM 871 CA ASN 331 44.487 0.338 15.498 1.00 28.09 PROT
ATOM 872 CB ASN 331 44.460 0.275 13.971 1.00 24.95 PROT
ATOM 873 CG ASN 331 43.074 0.540 13.397 1.00 33.45 PROT
ATOM 874 OD1 ASN 331 42.512 -0.305 12.701 1.00 38.21 PROT
ATOM 875 ND2 ASN 331 42.522 1.715 13.680 1.00 24.73 PROT
ATOM 876 C ASN 331 43.946 -0.967 16.075 1.00 32.03 PROT
ATOM 877 O ASN 331 43.166 -1.668 15.431 1.00 35.49 PROT
ATOM 878 N GLY 332 44.357 -1.282 17.299 1.00 40.24 PROT
ATOM 879 CA GLY 332 43.894 -2.495 17.941 1.00 38.04 PROT
ATOM 880 C GLY 332 44.009 -3.665 16.998 1.00 40.09 PROT
ATOM 881 O GLY 332 43.001 -4.225 16.563 1.00 45.79 PROT
ATOM 882 N GLU 333 45.249 -4.013 16.664 1.00 41.60 PROT
ATOM 883 CA GLU 333 45.539 -5.126 15.763 1.00 36.28 PROT

ATOM	884	CB	GLU	333	44.752	-4.978	14.454	1.00 46.39	PROT
ATOM	885	CG	GLU	333	44.745	-3.580	13.862	1.00 58.03	PROT
ATOM	886	CD	GLU	333	43.883	-3.485	12.610	1.00 67.00	PROT
ATOM	887	OE1	GLU	333	44.446	-3.282	11.511	1.00 67.51	PROT
ATOM	888	OE2	GLU	333	42.644	-3.615	12.727	1.00 71.01	PROT
ATOM	889	C-	GLU	333	47.027	-5.266	15.446	1.00 33.13	PROT
ATOM	890	O	GLU	333	47.563	-6.366	15.486	1.00 27.97	PROT
ATOM	891	N	MET	334	47.692	-4.152	15.143	1.00 27.00	PROT
ATOM	892	CA	MET	334	49.111	-4.188	14.798	1.00 29.83	PROT
ATOM	893	CB	MET	334	49.416	-3.159	13.699	1.00 26.04	PROT
ATOM	894	CG	MET	334	50.561	-3.588	12.765	1.00 28.06	PROT
ATOM	895	SD	MET	334	51.263	-2.273	11.736	1.00 28.46	PROT
ATOM	896	CE	MET	334	50.021	-2.123	10.497	1.00 22.48	PROT
ATOM	897	C	MET	334	50.087	-3.995	15.959	1.00 33.52	PROT
ATOM	898	O	MET	334	50.071	-2.962	16.631	1.00 35.81	PROT
ATOM	899	N	ALA	335	50.942	-4.996	16.171	1.00 27.46	PROT
ATOM	900	CA	ALA	335	51.948	-4.976	17.234	1.00 29.69	PROT
ATOM	901	CB	ALA	335	51.966	-6.314	17.965	1.00 12.67	PROT
ATOM	902	C	ALA	335	53.336	-4.682	16.662	1.00 31.74	PROT
ATOM	903	O	ALA	335	53.943	-5.530	16.009	1.00 43.66	PROT
ATOM	904	N	VAL	336	53.848	-3.489	16.923	1.00 23.98	PROT
ATOM	905	CA	VAL	336	55.151	-3.118	16.405	1.00 21.32	PROT
ATOM	906	CB	VAL	336	55.028	-1.873	15.504	1.00 17.37	PROT
ATOM	907	CG1	VAL	336	53.945	-2.104	14.462	1.00 14.88	PROT
ATOM	908	CG2	VAL	336	54.686	-0.648	16.339	1.00 15.53	PROT
ATOM	909	C	VAL	336	56.150	-2.852	17.526	1.00 22.72	PROT
ATOM	910	O	VAL	336	55.763	-2.540	18.651	1.00 25.15	PROT
ATOM	911	N	THR	337	57.435	-3.001	17.220	1.00 19.21	PROT
ATOM	912	CA	THR	337	58.476	-2.765	18.205	1.00 20.31	PROT
ATOM	913	CB	THR	337	59.752	-3.578	17.884	1.00 14.76	PROT
ATOM	914	OG1	THR	337	59.957	-3.616	16.467	1.00 16.43	PROT
ATOM	915	CG2	THR	337	59.615	-4.995	18.393	1.00 7.08	PROT
ATOM	916	C	THR	337	58.785	-1.272	18.157	1.00 24.20	PROT
ATOM	917	O	THR	337	58.322	-0.591	17.245	1.00 28.05	PROT
ATOM	918	N	ARG	338	59.548	-0.766	19:134	1.00 27.55	PROT
ATOM	919	CA	ARG	338	59.917	0.655	19.197	1.00 16.80	PROT
ATOM	920	CB	ARG	338	60.757	0.942	20.446	1.00 17.04	PROT
ATOM	921	CG	ARG	338	61.687	2.149	20.303	1.00 9.79	PROT
ATOM	922	CD	ARG	338	62.666	2.276	21.458	1.00 2.00	PROT
ATOM	923	NE	ARG	338	61.994	2.128	22.739	1.00 20.70	PROT
ATOM	924	CZ	ARG	338	61.897	3.083	23.657	1.00 12.04	PROT
ATOM	925	NH1	ARG	338	61.261	2.840	24.784	1.00 27.11	PROT
ATOM	926	NH2	ARG	338	62.436	4.272	23.459	1.00 22.23	PROT
ATOM	927	C	ARG	338	60.702	1.085	17.968	1.00 21.26	PROT
ATOM	928	O	ARG	338	60.338	2.049	17.295	1.00 16.40	PROT
ATOM	929	N	GLY	339	61.792	0.374	17.693	1.00 31.57	PROT

```
ATOM   930  CA  GLY   339      62.609   0.696  16.540  1.00 32.42      PROT
ATOM   931  C   GLY   339      61.816   0.534  15.254  1.00 30.08      PROT
ATOM   932  O   GLY   339      61.932   1.342  14.328  1.00 25.82      PROT
ATOM   933  N   GLN   340      61.008  -0.520  15.192  1.00 16.60      PROT
ATOM   934  CA  GLN   340      60.191  -0.768  14.012  1.00 14.08      PROT
ATOM   935  CB  GLN   340      59.199  -1.884  14.301  1.00  5.73      PROT
ATOM   936  CG  GLN   340      58.849  -2.697  13.100  1.00 16.15      PROT
ATOM   937  CD  GLN   340      58.577  -4.141  13.442  1.00 22.46      PROT
ATOM   938  OE1 GLN   340      57.767  -4.450  14.316  1.00 30.45      PROT
ATOM   939  NE2 GLN   340      59.254  -5.040  12.749  1.00 34.19      PROT
ATOM   940  C   GLN   340      59.452   0.521  13.632  1.00 22.07      PROT
ATOM   941  O   GLN   340      59.707   1.103  12.576  1.00 21.13      PROT
ATOM   942  N   LEU   341      58.561   0.976  14.518  1.00 27.88      PROT
ATOM   943  CA  LEU   341      57.778   2.197  14.306  1.00 21.82      PROT
ATOM   944  CB  LEU   341      56.813   2.418  15.483  1.00 10.20      PROT
ATOM   945  CG  LEU   341      55.930   3.682  15.534  1.00 16.27      PROT
ATOM   946  CD1 LEU   341      54.777   3.618  14.518  1.00 13.27      PROT
ATOM   947  CD2 LEU   341      55.370   3.822  16.935  1.00 10.68      PROT
ATOM   948  C   LEU   341      58.683   3.413  14.138  1.00 13.98      PROT
ATOM   949  O   LEU   341      58.315   4.386  13.486  1.00  7.94      PROT
ATOM   950  N   LYS   342      59.867   3.361  14.734  1.00 11.48      PROT
ATOM   951  CA  LYS   342      60.804   4.465  14.613  1.00 17.77      PROT
ATOM   952  CB  LYS   342      62.063   4.213  15.459  1.00 13.58      PROT
ATOM   953  CG  LYS   342      63.219   5.173  15.140  1.00 13.27      PROT
ATOM   954  CD  LYS   342      64.173   5.358  16.319  1.00  5.44      PROT
ATOM   955  CE  LYS   342      64.500   6.829  16.546  1.00  5.47      PROT
ATOM   956  NZ  LYS   342      65.721   7.019  17.388  1.00  4.98      PROT
ATOM   957  C   LYS   342      61.184   4.579  13.141  1.00 19.97      PROT
ATOM   958  O   LYS   342      60.939   5.595  12.501  1.00 20.34      PROT
ATOM   959  N   ASN   343      61.764   3.510  12.605  1.00 26.88      PROT
ATOM   960  CA  ASN   343      62.196   3.470  11.219  1.00 22.34      PROT
ATOM   961  CB  ASN   343      62.829   2.123  10.929  1.00  4.80      PROT
ATOM   962  CG  ASN   343      64.060   1.894  11.758  1.00 18.77      PROT
ATOM   963  OD1 ASN   343      64.755   2.848  12.117  1.00 14.12      PROT
ATOM   964  ND2 ASN   343      64.340   0.634  12.083  1.00 12.72      PROT
ATOM   965  C   ASN   343      61.091   3.736  10.224  1.00 20.40      PROT
ATOM   966  O   ASN   343      61.309   4.417   9.232  1.00 20.76      PROT
ATOM   967  N   GLY   344      59.908   3.200  10.494  1.00 12.62      PROT
ATOM   968  CA  GLY   344      58.775   3.382   9.603  1.00  6.27      PROT
ATOM   969  C   GLY   344      58.229   4.796   9.451  1.00 14.56      PROT
ATOM   970  O   GLY   344      57.177   4.972   8.826  1.00 13.30      PROT
ATOM   971  N   GLY   345      58.902   5.795  10.030  1.00 16.51      PROT
ATOM   972  CA  GLY   345      58.439   7.166   9.869  1.00 20.04      PROT
ATOM   973  C   GLY   345      58.248   8.112  11.046  1.00 25.64      PROT
ATOM   974  O   GLY   345      58.243   9.331  10.849  1.00 23.32      PROT
ATOM   975  N   LEU   346      58.099   7.588  12.260  1.00 22.22      PROT
```

```
ATOM   976  CA  LEU  346      57.874   8.449  13.415  1.00 14.94      PROT
ATOM   977  CB  LEU  346      57.070   7.700  14.474  1.00  3.92      PROT
ATOM   978  CG  LEU  346      55.566   7.538  14.193  1.00  5.92      PROT
ATOM   979  CD1 LEU  346      54.938   6.796  15.355  1.00  2.00      PROT
ATOM   980  CD2 LEU  346      54.884   8.885  13.973  1.00  2.00      PROT
ATOM   981  C   LEU  346      59.126   9.042  14.041  1.00 14.60      PROT
ATOM   982  O   LEU  346      59.102  10.153  14.554  1.00 17.36      PROT
ATOM   983  N   GLY  347      60.226   8.312  14.001  1.00 12.09      PROT
ATOM   984  CA  GLY  347      61.455   8.828  14.581  1.00 15.62      PROT
ATOM   985  C   GLY  347      61.439   8.963  16.090  1.00  6.31      PROT
ATOM   986  O   GLY  347      60.865   8.141  16.790  1.00 13.15      PROT
ATOM   987  N   VAL  348      62.076  10.011  16.592  1.00 13.74      PROT
ATOM   988  CA  VAL  348      62.141  10.259  18.030  1.00 10.13      PROT
ATOM   989  CB  VAL  348      62.757  11.646  18.342  1.00  9.26      PROT
ATOM   990  CG1 VAL  348      61.867  12.752  17.794  1.00  2.00      PROT
ATOM   991  CG2 VAL  348      62.942  11.802  19.836  1.00  2.00      PROT
ATOM   992  C   VAL  348      60.763  10.216  18.650  1.00  6.61      PROT
ATOM   993  O   VAL  348      60.619  10.066  19.862  1.00  3.12      PROT
ATOM   994  N   VAL  349      59.746  10.358  17.816  1.00  5.51      PROT
ATOM   995  CA  VAL  349      58.386  10.342  18.306  1.00  2.00      PROT
ATOM   996  CB  VAL  349      57.421  10.886  17.260  1.00  4.46      PROT
ATOM   997  CG1 VAL  349      56.001  10.578  17.656  1.00  2.00      PROT
ATOM   998  CG2 VAL  349      57.623  12.387  17.122  1.00  2.00      PROT
ATOM   999  C   VAL  349      57.995   8.933  18.687  1.00  9.15      PROT
ATOM  1000  O   VAL  349      57.284   8.726  19.664  1.00 15.02      PROT
ATOM  1001  N   SER  350      58.446   7.943  17.933  1.00  7.42      PROT
ATOM  1002  CA  SER  350      58.087   6.590  18.315  1.00 12.87      PROT
ATOM  1003  CB  SER  350      58.695   5.561  17.382  1.00  9.48      PROT
ATOM  1004  OG  SER  350      58.529   4.269  17.931  1.00 10.82      PROT
ATOM  1005  C   SER  350      58.628   6.364  19.717  1.00 15.55      PROT
ATOM  1006  O   SER  350      57.963   5.761  20.558  1.00 25.88      PROT
ATOM  1007  N   ASP  351      59.838   6.863  19.950  1.00 16.38      PROT
ATOM  1008  CA  ASP  351      60.522   6.743  21.230  1.00  9.58      PROT
ATOM  1009  CB  ASP  351      61.861   7.469  21.176  1.00  7.32      PROT
ATOM  1010  CG  ASP  351      62.989   6.576  20.742  1.00 24.16      PROT
ATOM  1011  OD1 ASP  351      64.011   7.110  20.275  1.00 30.24      PROT
ATOM  1012  OD2 ASP  351      62.866   5.343  20.869  1.00 33.85      PROT
ATOM  1013  C   ASP  351      59.695   7.360  22.334  1.00 17.01      PROT
ATOM  1014  O   ASP  351      59.605   6.822  23.435  1.00 26.28      PROT
ATOM  1015  N   ALA  352      59.100   8.508  22.032  1.00 13.51      PROT
ATOM  1016  CA  ALA  352      58.294   9.224  23.004  1.00  5.19      PROT
ATOM  1017  CB  ALA  352      57.914  10.593  22.452  1.00  2.00      PROT
ATOM  1018  C   ALA  352      57.055   8.432  23.374  1.00  2.00      PROT
ATOM  1019  O   ALA  352      56.701   8.360  24.535  1.00  7.20      PROT
ATOM  1020  N   ILE  353      56.396   7.832  22.393  1.00  2.00      PROT
ATOM  1021  CA  ILE  353      55.201   7.049  22.677  1.00  5.90      PROT
```

```
ATOM  1022  CB  ILE  353      54.468   6.626  21.381  1.00  5.87      PROT
ATOM  1023  CG2 ILE  353      53.113   6.049  21.732  1.00  2.00      PROT
ATOM  1024  CG1 ILE  353      54.349   7.831  20.428  1.00  3.91      PROT
ATOM  1025  CD1 ILE  353      53.330   7.664  19.294  1.00  2.00      PROT
ATOM  1026  C   ILE  353      55.554   5.795  23.484  1.00 12.46      PROT
ATOM  1027  O   ILE  353      54.848   5.426  24.428  1.00 11.74      PROT
ATOM  1028  N   PHE  354      56.644   5.131  23.122  1.00 19.57      PROT
ATOM  1029  CA  PHE  354      57.034   3.944  23.862  1.00 14.42      PROT
ATOM  1030  CB  PHE  354      58.256   3.270  23.209  1.00  3.70      PROT
ATOM  1031  CG  PHE  354      57.890   2.141  22.284  1.00  9.42      PROT
ATOM  1032  CD1 PHE  354      57.427   2.401  20.995  1.00 12.33      PROT
ATOM  1033  CD2 PHE  354      57.912   0.822  22.727  1.00 15.63      PROT
ATOM  1034  CE1 PHE  354      56.982   1.366  20.165  1.00  6.67      PROT
ATOM  1035  CE2 PHE  354      57.468  -0.224  21.900  1.00 16.53      PROT
ATOM  1036  CZ  PHE  354      57.002   0.053  20.620  1.00 11.61      PROT
ATOM  1037  C   PHE  354      57.322   4.346  25.307  1.00 18.55      PROT
ATOM  1038  O   PHE  354      56.796   3.740  26.233  1.00 16.67      PROT
ATOM  1039  N   ASP  355      58.125   5.392  25.491  1.00 12.83      PROT
ATOM  1040  CA  ASP  355      58.486   5.881  26.818  1.00  5.31      PROT
ATOM  1041  CB  ASP  355      59.351   7.132  26.697  1.00  9.38      PROT
ATOM  1042  CG  ASP  355      60.805   6.814  26.428  1.00  5.96      PROT
ATOM  1043  OD1 ASP  355      61.112   5.683  26.016  1.00  8.53      PROT
ATOM  1044  OD2 ASP  355      61.650   7.706  26.628  1.00 15.51      PROT
ATOM  1045  C   ASP  355      57.252   6.199  27.659  1.00 10.27      PROT
ATOM  1046  O   ASP  355      57.231   5.972  28.871  1.00 21.86      PROT
ATOM  1047  N   LEU  356      56.224   6.726  27.014  1.00  4.18      PROT
ATOM  1048  CA  LEU  356      54.988   7.061  27.697  1.00  2.07      PROT
ATOM  1049  CB  LEU  356      54.086   7.865  26.771  1.00  2.24      PROT
ATOM  1050  CG  LEU  356      52.694   8.229  27.266  1.00  3.11      PROT
ATOM  1051  CD1 LEU  356      52.771   9.317  28.323  1.00  2.00      PROT
ATOM  1052  CD2 LEU  356      51.877   8.709  26.086  1.00  2.00      PROT
ATOM  1053  C   LEU  356      54.281   5.786  28.091  1.00  9.17      PROT
ATOM  1054  O   LEU  356      53.831   5.644  29.221  1.00 14.77      PROT
ATOM  1055  N   GLY  357      54.183   4.856  27.147  1.00 13.10      PROT
ATOM  1056  CA  GLY  357      53.515   3.597  27.413  1.00  6.91      PROT
ATOM  1057  C   GLY  357      54.113   2.879  28.598  1.00  8.33      PROT
ATOM  1058  O   GLY  357      53.400   2.426  29.492  1.00  9.09      PROT
ATOM  1059  N   MET  358      55.435   2.768  28.607  1.00 12.61      PROT
ATOM  1060  CA  MET  358      56.112   2.091  29.692  1.00 10.53      PROT
ATOM  1061  CB  MET  358      57.626   2.153  29.498  1.00  5.45      PROT
ATOM  1062  CG  MET  358      58.138   1.507  28.210  1.00 15.15      PROT
ATOM  1063  SD  MET  358      59.971   1.352  28.113  1.00 17.63      PROT
ATOM  1064  CE  MET  358      60.445   3.023  27.774  1.00 20.56      PROT
ATOM  1065  C   MET  358      55.714   2.809  30.972  1.00 15.08      PROT
ATOM  1066  O   MET  358      55.241   2.191  31.920  1.00 27.69      PROT
ATOM  1067  N   SER  359      55.875   4.125  30.984  1.00 20.67      PROT
```

```
ATOM  1068  CA  SER  359      55.551   4.924  32.158  1.00 19.72      PROT
ATOM  1069  CB  SER  359      55.831   6.398  31.861  1.00 19.98      PROT
ATOM  1070  OG  SER  359      54.753   7.220  32.262  1.00 33.66      PROT
ATOM  1071  C   SER  359      54.115   4.757  32.656  1.00 22.67      PROT
ATOM  1072  O   SER  359      53.849   4.837  33.860  1.00 22.94      PROT
ATOM  1073  N   LEU  360      53.197   4.514  31.727  1.00 20.55      PROT
ATOM  1074  CA  LEU  360      51.785   4.360  32.054  1.00 17.01      PROT
ATOM  1075  CB  LEU  360      50.934   4.578  30.802  1.00  2.60      PROT
ATOM  1076  CG  LEU  360      50.674   5.988  30.291  1.00  6.99      PROT
ATOM  1077  CD1 LEU  360      49.589   5.935  29.236  1.00  4.15      PROT
ATOM  1078  CD2 LEU  360      50.247   6.892  31.432  1.00 18.93      PROT
ATOM  1079  C   LEU  360      51.437   3.001  32.638  1.00 19.29      PROT
ATOM  1080  O   LEU  360      50.319   2.802  33.102  1.00 27.53      PROT
ATOM  1081  N   SER  361      52.375   2.061  32.596  1.00 21.73      PROT
ATOM  1082  CA  SER  361      52.139   0.712  33.114  1.00 23.03      PROT
ATOM  1083  CB  SER  361      53.415  -0.130  33.027  1.00 25.89      PROT
ATOM  1084  OG  SER  361      53.645  -0.613  31.717  1.00 27.77      PROT
ATOM  1085  C   SER  361      51.681   0.730  34.563  1.00 23.26      PROT
ATOM  1086  O   SER  361      50.720   0.046  34.929  1.00 18.73      PROT
ATOM  1087  N   SER  362      52.388   1.524  35.367  1.00 29.84      PROT
ATOM  1088  CA  SER  362      52.141   1.668  36.799  1.00 24.49      PROT
ATOM  1089  CB  SER  362      53.435   2.089  37.491  1.00 26.14      PROT
ATOM  1090  OG  SER  362      53.917   3.305  36.949  1.00 25.03      PROT
ATOM  1091  C   SER  362      51.031   2.635  37.210  1.00 26.86      PROT
ATOM  1092  O   SER  362      50.797   2.831  38.404  1.00 39.63      PROT
ATOM  1093  N   PHE  363      50.361   3.251  36.240  1.00 20.94      PROT
ATOM  1094  CA  PHE  363      49.272   4.185  36.545  1.00 18.33      PROT
ATOM  1095  CB  PHE  363      49.191   5.294  35.486  1.00 17.03      PROT
ATOM  1096  CG  PHE  363      50.171   6.407  35.706  1.00 22.73      PROT
ATOM  1097  CD1 PHE  363      49.733   7.689  35.990  1.00  9.72      PROT
ATOM  1098  CD2 PHE  363      51.545   6.167  35.659  1.00 24.77      PROT
ATOM  1099  CE1 PHE  363      50.645   8.712  36.225  1.00 16.85      PROT
ATOM  1100  CE2 PHE  363      52.463   7.198  35.897  1.00 14.26      PROT
ATOM  1101  CZ  PHE  363      52.011   8.462  36.179  1.00  2.26      PROT
ATOM  1102  C   PHE  363      47.958   3.417  36.598  1.00 16.57      PROT
ATOM  1103  O   PHE  363      46.971   3.882  37.165  1.00 13.08      PROT
ATOM  1104  N   ASN  364      47.976   2.231  36.002  1.00 17.31      PROT
ATOM  1105  CA  ASN  364      46.819   1.349  35.949  1.00 26.11      PROT
ATOM  1106  CB  ASN  364      46.673   0.608  37.276  1.00 16.96      PROT
ATOM  1107  CG  ASN  364      47.402  -0.715  37.267  1.00 31.34      PROT
ATOM  1108  OD1 ASN  364      46.965  -1.657  36.613  1.00 36.66      PROT
ATOM  1109  ND2 ASN  364      48.527  -0.794  37.985  1.00 31.61      PROT
ATOM  1110  C   ASN  364      45.527   2.060  35.594  1.00 18.22      PROT
ATOM  1111  O   ASN  364      44.522   1.923  36.286  1.00 23.17      PROT
ATOM  1112  N   LEU  365      45.567   2.803  34.491  1.00 13.10      PROT
ATOM  1113  CA  LEU  365      44.417   3.562  34.013  1.00 15.41      PROT
```

```
ATOM  1114  CB  LEU  365     44.833   4.483  32.861  1.00 16.55      PROT
ATOM  1115  CG  LEU  365     45.762   5.653  33.181  1.00 19.56      PROT
ATOM  1116  CD1 LEU  365     46.146   6.373  31.897  1.00  6.69      PROT
ATOM  1117  CD2 LEU  365     45.067   6.602  34.128  1.00 15.69      PROT
ATOM  1118  C   LEU  365     43.328   2.624  33.520  1.00 12.07      PROT
ATOM  1119  O-  LEU  365     43.620   1.534  33.043  1.00 19.81      PROT
ATOM  1120  N   ASP  366     42.077   3.047  33.653  1.00 10.86      PROT
ATOM  1121  CA  ASP  366     40.942   2.263  33.180  1.00  8.96      PROT
ATOM  1122  CB  ASP  366     39.933   2.021  34.326  1.00  9.59      PROT
ATOM  1123  CG  ASP  366     39.300   3.306  34.859  1.00 21.78      PROT
ATOM  1124  OD1 ASP  366     39.871   4.397  34.676  1.00 25.60      PROT
ATOM  1125  OD2 ASP  366     38.217   3.222  35.474  1.00 19.16      PROT
ATOM  1126  C   ASP  366     40.288   3.005  32.002  1.00  8.82      PROT
ATOM  1127  O   ASP  366     40.666   4.132  31.681  1.00 17.66      PROT
ATOM  1128  N   ASP  367     39.321   2.379  31.346  1.00  9.45      PROT
ATOM  1129  CA  ASP  367     38.668   3.023  30.218  1.00 11.11      PROT
ATOM  1130  CB  ASP  367     37.457   2.205  29.769  1.00 20.67      PROT
ATOM  1131  CG  ASP  367     37.832   0.812  29.301  1.00 25.02      PROT
ATOM  1132  OD1 ASP  367     39.040   0.525  29.158  1.00 21.06      PROT
ATOM  1133  OD2 ASP  367     36.909   0.002  29.076  1.00 31.37      PROT
ATOM  1134  C   ASP  367     38.233   4.445  30.574  1.00 14.44      PROT
ATOM  1135  O   ASP  367     38.457   5.380  29.815  1.00 26.42      PROT
ATOM  1136  N   THR  368     37.619   4.612  31.735  1.00 13.62      PROT
ATOM  1137  CA  THR  368     37.157   5.926  32.160  1.00 13.14      PROT
ATOM  1138  CB  THR  368     36.510   5.853  33.547  1.00 16.53      PROT
ATOM  1139  OG1 THR  368     35.482   4.856  33.550  1.00 10.44      PROT
ATOM  1140  CG2 THR  368     35.928   7.188  33.925  1.00  5.20      PROT
ATOM  1141  C   THR  368     38.291   6.942  32.226  1.00 13.03      PROT
ATOM  1142  O   THR  368     38.114   8.108  31.878  1.00 12.90      PROT
ATOM  1143  N   GLU  369     39.455   6.492  32.686  1.00  9.96      PROT
ATOM  1144  CA  GLU  369     40.616   7.365  32.821  1.00  7.34      PROT
ATOM  1145  CB  GLU  369     41.673   6.687  33.708  1.00 10.25      PROT
ATOM  1146  CG  GLU  369     41.584   7.113  35.189  1.00 14.56      PROT
ATOM  1147  CD  GLU  369     41.599   5.945  36.167  1.00 19.39      PROT
ATOM  1148  OE1 GLU  369     42.255   4.922  35.864  1.00 19.65      PROT
ATOM  1149  OE2 GLU  369     40.954   6.054  37.233  1.00  7.98      PROT
ATOM  1150  C   GLU  369     41.203   7.768  31.468  1.00  4.33      PROT
ATOM  1151  O   GLU  369     41.467   8.944  31.213  1.00  7.50      PROT
ATOM  1152  N   VAL  370     41.406   6.784  30.603  1.00 12.29      PROT
ATOM  1153  CA  VAL  370     41.927   7.040  29.267  1.00 19.01      PROT
ATOM  1154  CB  VAL  370     42.092   5.726  28.496  1.00 10.10      PROT
ATOM  1155  CG1 VAL  370     42.431   6.011  27.049  1.00  8.57      PROT
ATOM  1156  CG2 VAL  370     43.168   4.877  29.159  1.00 12.40      PROT
ATOM  1157  C   VAL  370     40.896   7.915  28.555  1.00 18.30      PROT
ATOM  1158  O   VAL  370     41.230   8.872  27.855  1.00 17.19      PROT
ATOM  1159  N   ALA  371     39.633   7.581  28.760  1.00  2.00      PROT
```

ATOM 1160 CA ALA 371 38.549 8.321 28.157 1.00 3.53 PROT
ATOM 1161 CB ALA 371 37.215 7.728 28.591 1.00 9.17 PROT
ATOM 1162 C ALA 371 38.603 9.797 28.529 1.00 9.97 PROT
ATOM 1163 O ALA 371 38.626 10.666 27.655 1.00 24.55 PROT
ATOM 1164 N LEU 372 38.633 10.082 29.831 1.00 14.85 PROT
ATOM 1165 CA LEU 372 38.636 11.463 30.307 1.00 9.24 PROT
ATOM 1166 CB LEU 372 38.480 11.501 31.830 1.00 8.83 PROT
ATOM 1167 CG LEU 372 37.043 11.288 32.364 1.00 5.50 PROT
ATOM 1168 CD1 LEU 372 37.036 10.338 33.553 1.00 2.02 PROT
ATOM 1169 CD2 LEU 372 36.455 12.626 32.770 1.00 2.00 PROT
ATOM 1170 C LEU 372 39.867 12.218 29.870 1.00 10.17 PROT
ATOM 1171 O LEU 372 39.791 13.413 29.568 1.00 7.23 PROT
ATOM 1172 N LEU 373 40.996 11.510 29.825 1.00 13.10 PROT
ATOM 1173 CA LEU 373 42.270 12.078 29.399 1.00 2.00 PROT
ATOM 1174 CB LEU 373 43.325 10.981 29.381 1.00 2.00 PROT
ATOM 1175 CG LEU 373 44.705 11.118 30.045 1.00 9.64 PROT
ATOM 1176 CD1 LEU 373 44.817 12.382 30.875 1.00 2.00 PROT
ATOM 1177 CD2 LEU 373 44.955 9.883 30.882 1.00 2.00 PROT
ATOM 1178 C LEU 373 42.026 12.602 27.987 1.00 6.58 PROT
ATOM 1179 O LEU 373 42.357 13.738 27.660 1.00 9.73 PROT
ATOM 1180 N GLN 374 41.401 11.763 27.165 1.00 9.45 PROT
ATOM 1181 CA GLN 374 41.076 12.097 25.785 1.00 2.00 PROT
ATOM 1182 CB GLN 374 40.382 10.914 25.121 1.00 2.00 PROT
ATOM 1183 CG GLN 374 41.332 9.896 24.537 1.00 2.00 PROT
ATOM 1184 CD GLN 374 40.630 8.641 24.095 1.00 2.00 PROT
ATOM 1185 OE1 GLN 374 41.261 7.622 23.855 1.00 8.01 PROT
ATOM 1186 NE2 GLN 374 39.316 8.705 23.989 1.00 2.00 PROT
ATOM 1187 C GLN 374 40.187 13.326 25.694 1.00 2.78 PROT
ATOM 1188 O GLN 374 40.427 14.213 24.875 1.00 13.91 PROT
ATOM 1189 N ALA 375 39.151 13.386 26.521 1.00 2.00 PROT
ATOM 1190 CA ALA 375 38.261 14.546 26.505 1.00 2.00 PROT
ATOM 1191 CB ALA 375 37.128 14.348 27.489 1.00 3.97 PROT
ATOM 1192 C ALA 375 39.061 15.801 26.868 1.00 4.60 PROT
ATOM 1193 O ALA 375 38.881 16.864 26.274 1.00 8.82 PROT
ATOM 1194 N VAL 376 39.956 15.667 27.842 1.00 9.01 PROT
ATOM 1195 CA VAL 376 40.772 16.790 28.267 1.00 7.36 PROT
ATOM 1196 CB VAL 376 41.669 16.401 29.467 1.00 2.30 PROT
ATOM 1197 CG1 VAL 376 42.597 17.532 29.839 1.00 2.00 PROT
ATOM 1198 CG2 VAL 376 40.801 16.076 30.646 1.00 9.15 PROT
ATOM 1199 C VAL 376 41.629 17.256 27.110 1.00 3.94 PROT
ATOM 1200 O VAL 376 41.788 18.455 26.880 1.00 2.00 PROT
ATOM 1201 N LEU 377 42.179 16.297 26.379 1.00 3.92 PROT
ATOM 1202 CA LEU 377 43.020 16.618 25.239 1.00 5.65 PROT
ATOM 1203 CB LEU 377 43.714 15.354 24.731 1.00 5.08 PROT
ATOM 1204 CG LEU 377 45.052 15.005 25.386 1.00 2.00 PROT
ATOM 1205 CD1 LEU 377 45.620 13.790 24.719 1.00 2.00 PROT

ATOM 1206 CD2 LEU 377 46.016 16.157 25.264 1.00 4.14 PROT
ATOM 1207 C LEU 377 42.173 17.271 24.137 1.00 11.35 PROT
ATOM 1208 O LEU 377 42.607 18.240 23.515 1.00 8.78 PROT
ATOM 1209 N LEU 378 40.959 16.766 23.912 1.00 5.62 PROT
ATOM 1210 CA LEU 378 40.080 17.352 22.900 1.00 8.57 PROT
ATOM 1211 CB LEU 378 38.784 16.553 22.788 1.00 5.98 PROT
ATOM 1212 CG LEU 378 37.847 16.993 21.658 1.00 6.60 PROT
ATOM 1213 CD1 LEU 378 38.550 16.826 20.329 1.00 2.00 PROT
ATOM 1214 CD2 LEU 378 36.563 16.172 21.690 1.00 9.27 PROT
ATOM 1215 C LEU 378 39.738 18.833 23.146 1.00 10.76 PROT
ATOM 1216 O LEU 378 40.045 19.689 22.312 1.00 14.81 PROT
ATOM 1217 N MET 379 39.106 19.139 24.278 1.00 13.15 PROT
ATOM 1218 CA MET 379 38.735 20.521 24.591 1.00 13.60 PROT
ATOM 1219 CB MET 379 37.698 20.543 25.709 1.00 12.57 PROT
ATOM 1220 CG MET 379 36.425 19.782 25.395 1.00 21.12 PROT
ATOM 1221 SD MET 379 35.533 20.396 23.927 1.00 15.79 PROT
ATOM 1222 CE MET 379 34.397 19.099 23.756 1.00 13.95 PROT
ATOM 1223 C MET 379 39.912 21.419 24.988 1.00 16.01 PROT
ATOM 1224 O MET 379 39.981 21.897 26.121 1.00 16.95 PROT
ATOM 1225 N SER 380 40.824 21.663 24.048 1.00 12.39 PROT
ATOM 1226 CA SER 380 41.984 22.506 24.303 1.00 10.77 PROT
ATOM 1227 CB SER 380 43.248 21.815 23.810 1.00 8.45 PROT
ATOM 1228 OG SER 380 43.288 20.487 24.286 1.00 17.27 PROT
ATOM 1229 C SER 380 41.825 23.859 23.621 1.00 15.58 PROT
ATOM 1230 O SER 380 42.125 24.019 22.432 1.00 23.09 PROT
ATOM 1231 N SER 381 41.368 24.837 24.396 1.00 23.65 PROT
ATOM 1232 CA SER 381 41.123 26.187 23.904 1.00 25.18 PROT
ATOM 1233 CB SER 381 40.449 27.018 25.003 1.00 34.78 PROT
ATOM 1234 OG SER 381 41.250 27.073 26.170 1.00 37.79 PROT
ATOM 1235 C SER 381 42.342 26.940 23.388 1.00 19.38 PROT
ATOM 1236 O SER 381 42.216 28.032 22.850 1.00 28.81 PROT
ATOM 1237 N ASP 382 43.519 26.361 23.523 1.00 11.80 PROT
ATOM 1238 CA ASP 382 44.716 27.057 23.082 1.00 15.78 PROT
ATOM 1239 CB ASP 382 45.908 26.595 23.909 1.00 33.97 PROT
ATOM 1240 CG ASP 382 46.069 25.098 23.891 1.00 48.78 PROT
ATOM 1241 OD1 ASP 382 45.169 24.401 24.406 1.00 45.58 PROT
ATOM 1242 OD2 ASP 382 47.091 24.620 23.356 1.00 56.52 PROT
ATOM 1243 C ASP 382 45.037 26.888 21.604 1.00 21.28 PROT
ATOM 1244 O ASP 382 45.907 27.585 21.079 1.00 41.91 PROT
ATOM 1245 N ARG 383 44.357 25.971 20.923 1.00 21.81 PROT
ATOM 1246 CA ARG 383 44.636 25.773 19.503 1.00 18.95 PROT
ATOM 1247 CB ARG 383 43.745 24.685 18.921 1.00 8.26 PROT
ATOM 1248 CG ARG 383 43.580 23.491 19.821 1.00 18.07 PROT
ATOM 1249 CD ARG 383 44.693 22.487 19.610 1.00 11.10 PROT
ATOM 1250 NE ARG 383 44.480 21.261 20.378 1.00 20.54 PROT
ATOM 1251 CZ ARG 383 45.460 20.462 20.786 1.00 18.25 PROT

ATOM 1252 NH1 ARG 383 45.187 19.365 21.481 1.00 5.24 PROT
ATOM 1253 NH2 ARG 383 46.717 20.765 20.495 1.00 19.21 PROT
ATOM 1254 C ARG 383 44.420 27.064 18.728 1.00 19.64 PROT
ATOM 1255 O ARG 383 43.493 27.828 19.001 1.00 17.46 PROT
ATOM 1256 N PRO 384 45.298 27.342 17.762 1.00 25.37 PROT
ATOM 1257 CD PRO 384 46.485 26.567 17.359 1.00 35.06 PROT
ATOM 1258 CA PRO 384 45.124 28.569 16.983 1.00 27.53 PROT
ATOM 1259 CB PRO 384 46.422 28.693 16.181 1.00 18.75 PROT
ATOM 1260 CG PRO 384 47.041 27.338 16.190 1.00 27.78 PROT
ATOM 1261 C PRO 384 43.895 28.476 16.081 1.00 28.76 PROT
ATOM 1262 O PRO 384 43.562 27.402 15.560 1.00 31.18 PROT
ATOM 1263 N GLY 385 43.215 29.606 15.917 1.00 27.37 PROT
ATOM 1264 CA GLY 385 42.039 29.638 15.073 1.00 26.98 PROT
ATOM 1265 C GLY 385 40.728 29.442 15.803 1.00 27.46 PROT
ATOM 1266 O GLY 385 39.689 29.911 15.339 1.00 31.99 PROT
ATOM 1267 N LEU 386 40.756 28.756 16.939 1.00 34.99 PROT
ATOM 1268 CA LEU 386 39.524 28.515 17.673 1.00 37.24 PROT
ATOM 1269 CB LEU 386 39.820 27.947 19.059 1.00 26.60 PROT
ATOM 1270 CG LEU 386 40.233 26.472 18.988 1.00 32.45 PROT
ATOM 1271 CD1 LEU 386 40.177 25.859 20.363 1.00 34.82 PROT
ATOM 1272 CD2 LEU 386 39.314 25.719 18.030 1.00 29.64 PROT
ATOM 1273 C LEU 386 38.733 29.795 17.778 1.00 36.93 PROT
ATOM 1274 O LEU 386 39.291 30.881 17.674 1.00 37.60 PROT
ATOM 1275 N ALA 387 37.427 29.665 17.962 1.00 31.47 PROT
ATOM 1276 CA ALA 387 36.578 30.832 18.058 1.00 28.80 PROT
ATOM 1277 CB ALA 387 35.553 30.814 16.950 1.00 41.01 PROT
ATOM 1278 C ALA 387 35.890 30.864 19.400 1.00 28.89 PROT
ATOM 1279 O ALA 387 35.998 31.842 20.133 1.00 30.62 PROT
ATOM 1280 N CYS 388 35.167 29.797 19.710 1.00 25.92 PROT
ATOM 1281 CA CYS 388 34.469 29.712 20.978 1.00 26.90 PROT
ATOM 1282 CB CYS 388 33.224 28.823 20.826 1.00 21.38 PROT
ATOM 1283 SG CYS 388 31.625 29.732 20.698 1.00 33.66 PROT
ATOM 1284 C CYS 388 35.443 29.159 22.040 1.00 31.18 PROT
ATOM 1285 O CYS 388 35.272 28.054 22.552 1.00 36.57 PROT
ATOM 1286 N VAL 389 36.473 29.951 22.346 1.00 20.22 PROT
ATOM 1287 CA VAL 389 37.511 29.622 23.327 1.00 16.02 PROT
ATOM 1288 CB VAL 389 38.554 30.737 23.381 1.00 9.80 PROT
ATOM 1289 CG1 VAL 389 39.526 30.480 24.498 1.00 16.03 PROT
ATOM 1290 CG2 VAL 389 39.257 30.843 22.056 1.00 16.27 PROT
ATOM 1291 C VAL 389 36.977 29.425 24.753 1.00 18.85 PROT
ATOM 1292 O VAL 389 37.066 28.336 25.323 1.00 24.21 PROT
ATOM 1293 N GLU 390 36.461 30.500 25.337 1.00 5.06 PROT
ATOM 1294 CA GLU 390 35.908 30.434 26.660 1.00 2.00 PROT
ATOM 1295 CB GLU 390 35.092 31.684 26.952 1.00 5.13 PROT
ATOM 1296 C GLU 390 35.047 29.184 26.817 1.00 3.75 PROT
ATOM 1297 O GLU 390 35.252 28.419 27.754 1.00 23.35 PROT

ATOM 1298 N ARG 391 34.103 28.938 25.915 1.00 14.06 PROT
ATOM 1299 CA ARG 391 33.248 27.754 26.093 1.00 26.18 PROT
ATOM 1300 CB ARG 391 32.121 27.699 25.049 1.00 31.84 PROT
ATOM 1301 CG ARG 391 30.843 27.040 25.601 1.00 47.73 PROT
ATOM 1302 CD ARG 391 29.882 26.572 24.512 1.00 58.24 PROT
ATOM 1303 NE ARG 391 29.879 27.487 23.378 1.00 66.80 PROT
ATOM 1304 CZ ARG 391 29.001 28.470 23.211 1.00 69.56 PROT
ATOM 1305 NH1 ARG 391 29.088 29.255 22.139 1.00 66.99 PROT
ATOM 1306 NH2 ARG 391 28.034 28.663 24.105 1.00 56.08 PROT
ATOM 1307 C ARG 391 33.979 26.415 26.110 1.00 23.65 PROT
ATOM 1308 O ARG 391 33.561 25.479 26.794 1.00 28.58 PROT
ATOM 1309 N ILE 392 35.064 26.316 25.359 1.00 15.05 PROT
ATOM 1310 CA ILE 392 35.812 25.077 25.335 1.00 19.03 PROT
ATOM 1311 CB ILE 392 36.804 25.063 24.165 1.00 22.30 PROT
ATOM 1312 CG2 ILE 392 37.971 24.130 24.467 1.00 21.71 PROT
ATOM 1313 CG1 ILE 392 36.074 24.614 22.892 1.00 23.47 PROT
ATOM 1314 CD1 ILE 392 36.245 25.551 21.707 1.00 4.13 PROT
ATOM 1315 C ILE 392 36.544 24.907 26.671 1.00 25.03 PROT
ATOM 1316 O ILE 392 36.728 23.783 27.153 1.00 26.11 PROT
ATOM 1317 N GLU 393 36.947 26.029 27.266 1.00 30.74 PROT
ATOM 1318 CA GLU 393 37.630 26.021 28.558 1.00 23.39 PROT
ATOM 1319 CB GLU 393 38.073 27.430 28.930 1.00 27.18 PROT
ATOM 1320 CG GLU 393 39.435 27.817 28.402 1.00 41.39 PROT
ATOM 1321 CD GLU 393 39.990 29.051 29.093 1.00 47.72 PROT
ATOM 1322 OE1 GLU 393 39.365 29.524 30.070 1.00 39.94 PROT
ATOM 1323 OE2 GLU 393 41.051 29.547 28.653 1.00 51.17 PROT
ATOM 1324 C GLU 393 36.655 25.516 29.610 1.00 21.72 PROT
ATOM 1325 O GLU 393 36.942 24.574 30.344 1.00 22.82 PROT
ATOM 1326 N LYS 394 35.497 26.163 29.676 1.00 9.64 PROT
ATOM 1327 CA LYS 394 34.462 25.779 30.618 1.00 11.56 PROT
ATOM 1328 CB LYS 394 33.177 26.557 30.338 1.00 7.52 PROT
ATOM 1329 C LYS 394 34.213 24.280 30.492 1.00 16.31 PROT
ATOM 1330 O LYS 394 34.000 23.594 31.498 1.00 24.52 PROT
ATOM 1331 N TYR 395 34.251 23.763 29.264 1.00 12.79 PROT
ATOM 1332 CA TYR 395 34.033 22.332 29.057 1.00 19.02 PROT
ATOM 1333 CB TYR 395 33.803 22.025 27.572 1.00 27.90 PROT
ATOM 1334 CG TYR 395 32.454 22.456 27.027 1.00 31.64 PROT
ATOM 1335 CD1 TYR 395 32.136 22.267 25.684 1.00 30.15 PROT
ATOM 1336 CE1 TYR 395 30.927 22.695 25.160 1.00 28.34 PROT
ATOM 1337 CD2 TYR 395 31.514 23.085 27.835 1.00 34.21 PROT
ATOM 1338 CE2 TYR 395 30.298 23.518 27.317 1.00 34.01 PROT
ATOM 1339 CZ TYR 395 30.014 23.322 25.979 1.00 33.73 PROT
ATOM 1340 OH TYR 395 28.824 23.785 25.453 1.00 44.99 PROT
ATOM 1341 C TYR 395 35.208 21.490 29.584 1.00 19.03 PROT
ATOM 1342 O TYR 395 35.003 20.494 30.277 1.00 25.23 PROT
ATOM 1343 N GLN 396 36.437 21.883 29.256 1.00 17.76 PROT

ATOM 1344 CA GLN 396 37.596 21.134 29.725 1.00 13.73 PROT
ATOM 1345 CB GLN 396 38.905 21.766 29.240 1.00 2.45 PROT
ATOM 1346 CG GLN 396 40.061 20.767 29.110 1.00 2.00 PROT
ATOM 1347 CD GLN 396 41.388 21.439 28.799 1.00 5.12 PROT
ATOM 1348 OE1 GLN 396 41.706 22.484 29.359 1.00 10.11 PROT
ATOM 1349 NE2 GLN 396 42.169 20.840 27.903 1.00 9.09 PROT
ATOM 1350 C GLN 396 37.562 21.149 31.238 1.00 17.65 PROT
ATOM 1351 O GLN 396 37.802 20.125 31.894 1.00 9.63 PROT
ATOM 1352 N ASP 397 37.250 22.319 31.787 1.00 6.69 PROT
ATOM 1353 CA ASP 397 37.178 22.476 33.226 1.00 9.36 PROT
ATOM 1354 CB ASP 397 36.732 23.893 33.570 1.00 11.44 PROT
ATOM 1355 CG ASP 397 37.867 24.891 33.446 1.00 18.32 PROT
ATOM 1356 OD1 ASP 397 39.033 24.438 33.397 1.00 24.00 PROT
ATOM 1357 OD2 ASP 397 37.615 26.114 33.395 1.00 20.67 PROT
ATOM 1358 C ASP 397 36.215 21.443 33.771 1.00 7.77 PROT
ATOM 1359 O ASP 397 36.497 20.771 34.761 1.00 7.66 PROT
ATOM 1360 N SER 398 35.087 21.293 33.093 1.00 9.19 PROT
ATOM 1361 CA SER 398 34.094 20.322 33.508 1.00 14.18 PROT
ATOM 1362 CB SER 398 32.916 20.334 32.542 1.00 12.11 PROT
ATOM 1363 OG SER 398 32.406 21.650 32.423 1.00 31.95 PROT
ATOM 1364 C SER 398 34.712 18.939 33.556 1.00 11.47 PROT
ATOM 1365 O SER 398 34.591 18.227 34.551 1.00 21.11 PROT
ATOM 1366 N PHE 399 35.394 18.565 32.485 1.00 18.68 PROT
ATOM 1367 CA PHE 399 36.017 17.252 32.417 1.00 24.93 PROT
ATOM 1368 CB PHE 399 36.587 17.012 31.014 1.00 23.38 PROT
ATOM 1369 CG PHE 399 35.543 16.705 29.981 1.00 20.19 PROT
ATOM 1370 CD1 PHE 399 35.224 17.638 28.997 1.00 22.94 PROT
ATOM 1371 CD2 PHE 399 34.878 15.486 29.988 1.00 8.62 PROT
ATOM 1372 CE1 PHE 399 34.257 17.361 28.029 1.00 12.53 PROT
ATOM 1373 CE2 PHE 399 33.914 15.201 29.027 1.00 19.25 PROT
ATOM 1374 CZ PHE 399 33.604 16.143 28.044 1.00 15.15 PROT
ATOM 1375 C PHE 399 37.113 17.097 33.463 1.00 23.06 PROT
ATOM 1376 O PHE 399 37.210 16.063 34.137 1.00 15.58 PROT
ATOM 1377 N LEU 400 37.932 18.131 33.604 1.00 22.12 PROT
ATOM 1378 CA LEU 400 39.017 18.095 34.567 1.00 18.27 PROT
ATOM 1379 CB LEU 400 39.846 19.372 34.461 1.00 10.06 PROT
ATOM 1380 CG LEU 400 41.021 19.248 33.491 1.00 8.13 PROT
ATOM 1381 CD1 LEU 400 41.616 20.594 33.195 1.00 2.00 PROT
ATOM 1382 CD2 LEU 400 42.055 18.333 34.095 1.00 13.73 PROT
ATOM 1383 C LEU 400 38.527 17.892 36.002 1.00 24.79 PROT
ATOM 1384 O LEU 400 39.189 17.228 36.787 1.00 26.46 PROT
ATOM 1385 N LEU 401 37.371 18.447 36.354 1.00 21.93 PROT
ATOM 1386 CA LEU 401 36.862 18.268 37.707 1.00 17.21 PROT
ATOM 1387 CB LEU 401 35.766 19.285 38.022 1.00 19.27 PROT
ATOM 1388 CG LEU 401 35.538 19.547 39.515 1.00 16.76 PROT
ATOM 1389 CD1 LEU 401 36.652 20.403 40.085 1.00 2.00 PROT

ATOM 1390 CD2 LEU 401 34.206 20.235 39.687 1.00 14.41 PROT
ATOM 1391 C LEU 401 36.316 16.864 37.879 1.00 18.03 PROT
ATOM 1392 O LEU 401 36.482 16.250 38.925 1.00 28.63 PROT
ATOM 1393 N ALA 402 35.656 16.346 36.856 1.00 9.30 PROT
ATOM 1394 CA ALA 402 35.124 15.000 36.951 1.00 7.03 PROT
ATOM 1395 CB ALA 402 34.233 14.703 35.758 1.00 14.15 PROT
ATOM 1396 C ALA 402 36.298 14.029 36.989 1.00 7.68 PROT
ATOM 1397 O ALA 402 36.294 13.054 37.739 1.00 2.00 PROT
ATOM 1398 N PHE 403 37.311 14.305 36.178 1.00 4.49 PROT
ATOM 1399 CA PHE 403 38.477 13.439 36.140 1.00 9.18 PROT
ATOM 1400 CB PHE 403 39.510 13.977 35.138 1.00 12.80 PROT
ATOM 1401 CG PHE 403 40.545 12.957 34.693 1.00 5.42 PROT
ATOM 1402 CD1 PHE 403 41.590 13.334 33.859 1.00 2.00 PROT
ATOM 1403 CD2 PHE 403 40.480 11.634 35.103 1.00 2.00 PROT
ATOM 1404 CE1 PHE 403 42.546 12.410 33.448 1.00 2.00 PROT
ATOM 1405 CE2 PHE 403 41.440 10.711 34.688 1.00 2.00 PROT
ATOM 1406 CZ PHE 403 42.468 11.100 33.863 1.00 2.00 PROT
ATOM 1407 C PHE 403 39.080 13.366 37.539 1.00 10.08 PROT
ATOM 1408 O PHE 403 39.207 12.279 38.097 1.00 8.23 PROT
ATOM 1409 N GLU 404 39.451 14.514 38.103 1.00 12.64 PROT
ATOM 1410 CA GLU 404 40.030 14.546 39.448 1.00 19.23 PROT
ATOM 1411 CB GLU 404 40.227 15.989 39.942 1.00 19.80 PROT
ATOM 1412 CG GLU 404 41.532 16.220 40.728 1.00 24.03 PROT
ATOM 1413 CD GLU 404 41.474 17.429 41.655 1.00 29.60 PROT
ATOM 1414 OE1 GLU 404 41.706 18.565 41.182 1.00 29.51 PROT
ATOM 1415 OE2 GLU 404 41.197 17.247 42.861 1.00 30.42 PROT
ATOM 1416 C GLU 404 39.112 13.806 40.416 1.00 24.36 PROT
ATOM 1417 O GLU 404 39.571 12.963 41.200 1.00 28.04 PROT
ATOM 1418 N HIS 405 37.815 14.108 40.358 1.00 10.26 PROT
ATOM 1419 CA HIS 405 36.870 13.446 41.240 1.00 7.78 PROT
ATOM 1420 CB HIS 405 35.473 14.023 41.054 1.00 3.47 PROT
ATOM 1421 CG HIS 405 35.312 15.393 41.630 1.00 15.49 PROT
ATOM 1422 CD2 HIS 405 36.223 16.260 42.134 1.00 17.97 PROT
ATOM 1423 ND1 HIS 405 34.096 16.036 41.694 1.00 21.57 PROT
ATOM 1424 CE1 HIS 405 34.265 17.242 42.210 1.00 27.50 PROT
ATOM 1425 NE2 HIS 405 35.547 17.403 42.485 1.00 13.53 PROT
ATOM 1426 C HIS 405 36.856 11.936 41.005 1.00 14.88 PROT
ATOM 1427 O HIS 405 36.641 11.155 41.935 1.00 22.11 PROT
ATOM 1428 N TYR 406 37.091 11.512 39.767 1.00 16.52 PROT
ATOM 1429 CA TYR 406 37.085 10.083 39.491 1.00 14.35 PROT
ATOM 1430 CB TYR 406 37.007 9.808 37.989 1.00 9.90 PROT
ATOM 1431 CG TYR 406 36.840 8.346 37.657 1.00 2.00 PROT
ATOM 1432 CD1 TYR 406 35.587 7.742 37.676 1.00 8.84 PROT
ATOM 1433 CE1 TYR 406 35.433 6.382 37.386 1.00 8.78 PROT
ATOM 1434 CD2 TYR 406 37.939 7.562 37.338 1.00 15.34 PROT
ATOM 1435 CE2 TYR 406 37.801 6.204 37.044 1.00 13.48 PROT

```
ATOM  1436  CZ  TYR  406      36.548   5.624  37.073  1.00 15.64      PROT
ATOM  1437  OH  TYR  406      36.431   4.287  36.804  1.00  2.00      PROT
ATOM  1438  C   TYR  406      38.340   9.466  40.071  1.00  9.54      PROT
ATOM  1439  O   TYR  406      38.328   8.328  40.525  1.00 14.29      PROT
ATOM  1440  N   ILE  407      39.430  10.217  40.058  1.00  6.56      PROT
ATOM  1441  CA  ILE  407      40.671   9.708  40.617  1.00 13.87      PROT
ATOM  1442  CB  ILE  407      41.808  10.728  40.474  1.00 11.28      PROT
ATOM  1443  CG2 ILE  407      42.902  10.413  41.461  1.00  6.25      PROT
ATOM  1444  CG1 ILE  407      42.357  10.714  39.039  1.00 18.73      PROT
ATOM  1445  CD1 ILE  407      41.863   9.579  38.169  1.00 13.14      PROT
ATOM  1446  C   ILE  407      40.438   9.426  42.091  1.00 11.44      PROT
ATOM  1447  O   ILE  407      40.691   8.325  42.571  1.00  4.46      PROT
ATOM  1448  N   ASN  408      39.953  10.448  42.792  1.00 12.35      PROT
ATOM  1449  CA  ASN  408      39.642  10.363  44.213  1.00  2.00      PROT
ATOM  1450  CB  ASN  408      38.758  11.535  44.629  1.00  2.00      PROT
ATOM  1451  CG  ASN  408      39.499  12.840  44.657  1.00  3.57      PROT
ATOM  1452  OD1 ASN  408      40.733  12.859  44.656  1.00 14.35      PROT
ATOM  1453  ND2 ASN  408      38.758  13.949  44.689  1.00  2.00      PROT
ATOM  1454  C   ASN  408      38.868   9.078  44.432  1.00  6.49      PROT
ATOM  1455  O   ASN  408      39.282   8.187  45.178  1.00 10.45      PROT
ATOM  1456  N   TYR  409      37.731   8.987  43.766  1.00  2.00      PROT
ATOM  1457  CA  TYR  409      36.900   7.816  43.893  1.00  9.20      PROT
ATOM  1458  CB  TYR  409      35.879   7.783  42.760  1.00 11.66      PROT
ATOM  1459  CG  TYR  409      35.121   6.489  42.683  1.00 12.54      PROT
ATOM  1460  CD1 TYR  409      33.984   6.281  43.456  1.00 29.23      PROT
ATOM  1461  CE1 TYR  409      33.285   5.077  43.403  1.00 25.45      PROT
ATOM  1462  CD2 TYR  409      35.547   5.465  41.850  1.00 24.96      PROT
ATOM  1463  CE2 TYR  409      34.860   4.259  41.788  1.00 33.40      PROT
ATOM  1464  CZ  TYR  409      33.733   4.074  42.567  1.00 24.27      PROT
ATOM  1465  OH  TYR  409      33.065   2.883  42.509  1.00 32.72      PROT
ATOM  1466  C   TYR  409      37.753   6.553  43.867  1.00 13.96      PROT
ATOM  1467  O   TYR  409      37.730   5.763  44.804  1.00 29.48      PROT
ATOM  1468  N   ARG  410      38.531   6.399  42.803  1.00 23.04      PROT
ATOM  1469  CA  ARG  410      39.377   5.230  42.588  1.00 22.09      PROT
ATOM  1470  CB  ARG  410      39.982   5.327  41.190  1.00 13.24      PROT
ATOM  1471  CG  ARG  410      38.947   5.399  40.090  1.00 14.01      PROT
ATOM  1472  CD  ARG  410      38.934   4.111  39.275  1.00 16.49      PROT
ATOM  1473  NE  ARG  410      40.227   3.848  38.651  1.00  9.77      PROT
ATOM  1474  CZ  ARG  410      40.617   2.651  38.239  1.00 11.38      PROT
ATOM  1475  NH1 ARG  410      41.806   2.493  37.685  1.00 14.94      PROT
ATOM  1476  NH2 ARG  410      39.810   1.613  38.375  1.00 12.78      PROT
ATOM  1477  C   ARG  410      40.486   4.914  43.604  1.00 24.49      PROT
ATOM  1478  O   ARG  410      40.860   3.753  43.780  1.00 12.85      PROT
ATOM  1479  N   LYS  411      41.023   5.931  44.262  1.00 24.16      PROT
ATOM  1480  CA  LYS  411      42.085   5.706  45.235  1.00 27.14      PROT
ATOM  1481  CB  LYS  411      41.525   5.069  46.516  1.00 37.40      PROT
```

ATOM 1482 CG LYS 411 40.317 5.779 47.103 1.00 35.00 PROT
ATOM 1483 CD LYS 411 39.406 4.788 47.804 1.00 40.83 PROT
ATOM 1484 CE LYS 411 38.414 5.496 48.725 1.00 58.04 PROT
ATOM 1485 NZ LYS 411 38.833 5.496 50.168 1.00 54.40 PROT
ATOM 1486 C LYS 411 43.186 4.814 44.664 1.00 28.02 PROT
ATOM 1487 O LYS 411 43.209 3.598 44.876 1.00 25.00 PROT
ATOM 1488 N HIS 412 44.091 5.438 43.923 1.00 30.05 PROT
ATOM 1489 CA HIS 412 45.223 4.738 43.332 1.00 26.70 PROT
ATOM 1490 CB HIS 412 45.756 5.491 42.104 1.00 29.28 PROT
ATOM 1491 CG HIS 412 44.953 5.289 40.857 1.00 18.44 PROT
ATOM 1492 CD2 HIS 412 43.783 5.836 40.451 1.00 19.98 PROT
ATOM 1493 ND1 HIS 412 45.366 4.465 39.833 1.00 16.33 PROT
ATOM 1494 CE1 HIS 412 44.486 4.513 38.850 1.00 24.80 PROT
ATOM 1495 NE2 HIS 412 43.516 5.338 39.200 1.00 23.01 PROT
ATOM 1496 C HIS 412 46.281 4.788 44.406 1.00 20.73 PROT
ATOM 1497 O HIS 412 46.335 5.740 45.171 1.00 24.69 PROT
ATOM 1498 N HIS 413 47.138 3.784 44.461 1.00 28.17 PROT
ATOM 1499 CA HIS 413 48.183 3.788 45.465 1.00 28.09 PROT
ATOM 1500 CB HIS 413 48.219 2.426 46.144 1.00 21.71 PROT
ATOM 1501 CG HIS 413 46.906 2.053 46.759 1.00 44.26 PROT
ATOM 1502 CD2 HIS 413 46.140 0.941 46.632 1.00 43.48 PROT
ATOM 1503 ND1 HIS 413 46.214 2.902 47.600 1.00 40.00 PROT
ATOM 1504 CE1 HIS 413 45.080 2.328 47.962 1.00 47.35 PROT
ATOM 1505 NE2 HIS 413 45.011 1.137 47.390 1.00 35.50 PROT
ATOM 1506 C HIS 413 49.527 4.194 44.875 1.00 26.49 PROT
ATOM 1507 O HIS 413 50.483 3.421 44.829 1.00 31.82 PROT
ATOM 1508 N VAL 414 49.555 5.439 44.411 1.00 18.32 PROT
ATOM 1509 CA VAL 414 50.726 6.069 43.820 1.00 22.60 PROT
ATOM 1510 CB VAL 414 50.718 5.966 42.290 1.00 32.50 PROT
ATOM 1511 CG1 VAL 414 51.636 7.026 41.694 1.00 33.83 PROT
ATOM 1512 CG2 VAL 414 51.169 4.574 41.863 1.00 40.20 PROT
ATOM 1513 C VAL 414 50.630 7.529 44.225 1.00 17.96 PROT
ATOM 1514 O VAL 414 49.708 8.236 43.829 1.00 30.33 PROT
ATOM 1515 N THR 415 51.586 7.969 45.028 1.00 32.51 PROT
ATOM 1516 CA THR 415 51.601 9.332 45.531 1.00 35.31 PROT
ATOM 1517 CB THR 415 52.779 9.529 46.511 1.00 49.75 PROT
ATOM 1518 OG1 THR 415 53.023 10.930 46.702 1.00 60.64 PROT
ATOM 1519 CG2 THR 415 54.038 8.850 45.974 1.00 50.83 PROT
ATOM 1520 C THR 415 51.668 10.387 44.436 1.00 31.44 PROT
ATOM 1521 O THR 415 52.423 10.251 43.475 1.00 22.01 PROT
ATOM 1522 N HIS 416 50.865 11.437 44.607 1.00 24.94 PROT
ATOM 1523 CA HIS 416 50.781 12.559 43.671 1.00 27.82 PROT
ATOM 1524 CB HIS 416 52.163 13.164 43.440 1.00 32.98 PROT
ATOM 1525 CG HIS 416 52.776 13.747 44.671 1.00 44.74 PROT
ATOM 1526 CD2 HIS 416 53.982 13.539 45.251 1.00 44.91 PROT
ATOM 1527 ND1 HIS 416 52.121 14.665 45.462 1.00 49.20 PROT

ATOM 1528 CE1 HIS 416 52.899 15.000 46.477 1.00 53.14 PROT
ATOM 1529 NE2 HIS 416 54.033 14.330 46.373 1.00 41.72 PROT
ATOM 1530 C HIS 416 50.176 12.172 42.328 1.00 29.13 PROT
ATOM 1531 O HIS 416 50.612 12.660 41.286 1.00 37.24 PROT
ATOM 1532 N PHE 417 49.163 11.311 42.350 1.00 18.38 PROT
ATOM 1533 CA PHE 417 48.528 10.867 41.115 1.00 16.08 PROT
ATOM 1534 CB PHE 417 47.295 10.029 41.407 1.00 17.89 PROT
ATOM 1535 CG PHE 417 47.021 8.997 40.364 1.00 16.15 PROT
ATOM 1536 CD1 PHE 417 47.980 8.044 40.051 1.00 16.55 PROT
ATOM 1537 CD2 PHE 417 45.806 8.971 39.696 1.00 15.49 PROT
ATOM 1538 CE1 PHE 417 47.727 7.081 39.087 1.00 19.81 PROT
ATOM 1539 CE2 PHE 417 45.544 8.008 38.731 1.00 9.76 PROT
ATOM 1540 CZ PHE 417 46.501 7.064 38.427 1.00 5.25 PROT
ATOM 1541 C PHE 417 48.117 11.990 40.187 1.00 14.51 PROT
ATOM 1542 O PHE 417 48.636 12.119 39.081 1.00 18.44 PROT
ATOM 1543 N TRP 418 47.171 12.800 40.640 1.00 21.08 PROT
ATOM 1544 CA TRP 418 46.688 13.900 39.828 1.00 16.28 PROT
ATOM 1545 CB TRP 418 45.796 14.832 40.659 1.00 15.19 PROT
ATOM 1546 CG TRP 418 45.002 15.746 39.802 1.00 16.60 PROT
ATOM 1547 CD2 TRP 418 44.165 15.369 38.710 1.00 21.85 PROT
ATOM 1548 CE2 TRP 418 43.690 16.557 38.118 1.00 22.53 PROT
ATOM 1549 CE3 TRP 418 43.771 14.138 38.170 1.00 16.42 PROT
ATOM 1550 CD1 TRP 418 44.999 17.107 39.836 1.00 21.01 PROT
ATOM 1551 NE1 TRP 418 44.215 17.606 38.826 1.00 24.02 PROT
ATOM 1552 CZ2 TRP 418 42.838 16.555 37.010 1.00 24.64 PROT
ATOM 1553 CZ3 TRP 418 42.925 14.135 37.069 1.00 28.80 PROT
ATOM 1554 CH2 TRP 418 42.467 15.337 36.500 1.00 21.25 PROT
ATOM 1555 C TRP 418 47.834 14.676 39.192 1.00 16.17 PROT
ATOM 1556 O TRP 418 47.928 14.764 37.977 1.00 19.51 PROT
ATOM 1557 N PRO 419 48.723 15.250 40.007 1.00 19.59 PROT
ATOM 1558 CD PRO 419 48.757 15.274 41.477 1.00 19.81 PROT
ATOM 1559 CA PRO 419 49.837 16.002 39.429 1.00 17.87 PROT
ATOM 1560 CB PRO 419 50.720 16.309 40.629 1.00 6.85 PROT
ATOM 1561 CG PRO 419 49.785 16.326 41.764 1.00 25.11 PROT
ATOM 1562 C PRO 419 50.578 15.202 38.373 1.00 15.44 PROT
ATOM 1563 O PRO 419 50.922 15.720 37.315 1.00 24.75 PROT
ATOM 1564 N LYS 420 50.811 13.932 38.664 1.00 15.10 PROT
ATOM 1565 CA LYS 420 51.534 13.056 37.748 1.00 20.59 PROT
ATOM 1566 CB LYS 420 51.900 11.746 38.471 1.00 28.85 PROT
ATOM 1567 CG LYS 420 52.955 11.906 39.577 1.00 30.61 PROT
ATOM 1568 CD LYS 420 52.907 10.759 40.580 1.00 24.41 PROT
ATOM 1569 CE LYS 420 54.275 10.493 41.224 1.00 31.94 PROT
ATOM 1570 NZ LYS 420 54.485 9.040 41.557 1.00 27.34 PROT
ATOM 1571 C LYS 420 50.779 12.757 36.445 1.00 17.36 PROT
ATOM 1572 O LYS 420 51.393 12.439 35.437 1.00 26.28 PROT
ATOM 1573 N LEU 421 49.455 12.859 36.474 1.00 16.34 PROT

ATOM 1574 CA LEU 421 48.627 12.614 35.297 1.00 9.38 PROT
ATOM 1575 CB LEU 421 47.231 12.139 35.707 1.00 13.22 PROT
ATOM 1576 CG LEU 421 46.739 10.818 35.107 1.00 15.75 PROT
ATOM 1577 CD1 LEU 421 47.919 9.993 34.652 1.00 29.24 PROT
ATOM 1578 CD2 LEU 421 45.949 10.049 36.135 1.00 12.19 PROT
ATOM 1579 C- LEU 421 48.511 13.866 34.441 1.00 12.61 PROT
ATOM 1580 O LEU 421 48.458 13.777 33.223 1.00 17.85 PROT
ATOM 1581 N LEU 422 48.451 15.036 35.063 1.00 8.47 PROT
ATOM 1582 CA LEU 422 48.393 16.254 34.277 1.00 7.21 PROT
ATOM 1583 CB LEU 422 48.160 17.468 35.164 1.00 2.00 PROT
ATOM 1584 CG LEU 422 46.941 17.445 36.088 1.00 12.16 PROT
ATOM 1585 CD1 LEU 422 47.024 18.660 36.982 1.00 6.96 PROT
ATOM 1586 CD2 LEU 422 45.632 17.450 35.313 1.00 2.00 PROT
ATOM 1587 C LEU 422 49.748 16.365 33.567 1.00 10.59 PROT
ATOM 1588 O LEU 422 49.851 16.938 32.477 1.00 13.48 PROT
ATOM 1589 N MET 423 50.786 15.804 34.185 1.00 2.29 PROT
ATOM 1590 CA MET 423 52.109 15.821 33.579 1.00 6.50 PROT
ATOM 1591 CB MET 423 53.158 15.215 34.514 1.00 2.13 PROT
ATOM 1592 CG MET 423 53.361 15.968 35.803 1.00 16.33 PROT
ATOM 1593 SD MET 423 55.075 16.415 36.070 1.00 26.66 PROT
ATOM 1594 CE MET 423 55.751 14.880 36.623 1.00 20.24 PROT
ATOM 1595 C MET 423 52.016 14.966 32.318 1.00 12.20 PROT
ATOM 1596 O MET 423 52.741 15.183 31.345 1.00 18.67 PROT
ATOM 1597 N LYS 424 51.114 13.988 32.352 1.00 7.89 PROT
ATOM 1598 CA LYS 424 50.907 13.084 31.230 1.00 12.91 PROT
ATOM 1599 CB LYS 424 49.990 11.924 31.645 1.00 5.14 PROT
ATOM 1600 CG LYS 424 50.669 10.579 31.980 1.00 11.76 PROT
ATOM 1601 CD LYS 424 52.187 10.590 31.866 1.00 3.70 PROT
ATOM 1602 CE LYS 424 52.844 10.020 33.113 1.00 7.84 PROT
ATOM 1603 NZ LYS 424 54.335 9.959 32.995 1.00 25.86 PROT
ATOM 1604 C LYS 424 50.293 13.840 30.046 1.00 17.44 PROT
ATOM 1605 O LYS 424 50.650 13.596 28.897 1.00 11.72 PROT
ATOM 1606 N VAL 425 49.370 14.756 30.322 1.00 3.16 PROT
ATOM 1607 CA VAL 425 48.768 15.515 29.249 1.00 2.00 PROT
ATOM 1608 CB VAL 425 47.744 16.532 29.773 1.00 6.77 PROT
ATOM 1609 CG1 VAL 425 47.653 17.716 28.815 1.00 2.00 PROT
ATOM 1610 CG2 VAL 425 46.381 15.870 29.914 1.00 10.91 PROT
ATOM 1611 C VAL 425 49.845 16.274 28.487 1.00 4.83 PROT
ATOM 1612 O VAL 425 49.853 16.265 27.269 1.00 15.69 PROT
ATOM 1613 N THR 426 50.753 16.924 29.208 1.00 14.38 PROT
ATOM 1614 CA THR 426 51.824 17.707 28.593 1.00 12.41 PROT
ATOM 1615 CB THR 426 52.713 18.372 29.667 1.00 12.49 PROT
ATOM 1616 OG1 THR 426 51.890 19.138 30.552 1.00 11.06 PROT
ATOM 1617 CG2 THR 426 53.763 19.283 29.015 1.00 2.93 PROT
ATOM 1618 C THR 426 52.734 16.928 27.653 1.00 15.72 PROT
ATOM 1619 O THR 426 53.198 17.463 26.651 1.00 14.40 PROT

```
ATOM  1620  N   ASP  427     53.000  15.672  27.981  1.00 16.23      PROT
ATOM  1621  CA  ASP  427     53.865  14.843  27.157  1.00 16.35      PROT
ATOM  1622  CB  ASP  427     54.342  13.630  27.950  1.00 19.48      PROT
ATOM  1623  CG  ASP  427     55.337  13.997  29.029  1.00 18.96      PROT
ATOM  1624  OD1 ASP  427     55.874  15.125  29.010  1.00  8.75      PROT
ATOM  1625  OD2 ASP  427     55.579  13.145  29.902  1.00 24.25      PROT
ATOM  1626  C   ASP  427     53.155  14.381  25.891  1.00 20.52      PROT
ATOM  1627  O   ASP  427     53.793  14.164  24.856  1.00 25.69      PROT
ATOM  1628  N   LEU  428     51.838  14.218  25.986  1.00  5.49      PROT
ATOM  1629  CA  LEU  428     51.040  13.815  24.849  1.00  2.00      PROT
ATOM  1630  CB  LEU  428     49.634  13.470  25.301  1.00  2.00      PROT
ATOM  1631  CG  LEU  428     49.579  12.127  26.028  1.00  2.00      PROT
ATOM  1632  CD1 LEU  428     48.184  11.789  26.481  1.00  2.00      PROT
ATOM  1633  CD2 LEU  428     50.088  11.080  25.108  1.00  2.00      PROT
ATOM  1634  C   LEU  428     51.019  14.987  23.881  1.00  7.72      PROT
ATOM  1635  O   LEU  428     51.072  14.800  22.666  1.00  9.22      PROT
ATOM  1636  N   ARG  429     50.961  16.197  24.432  1.00 10.07      PROT
ATOM  1637  CA  ARG  429     50.948  17.438  23.659  1.00  7.97      PROT
ATOM  1638  CB  ARG  429     50.799  18.642  24.583  1.00 18.55      PROT
ATOM  1639  CG  ARG  429     49.548  18.634  25.429  1.00 14.80      PROT
ATOM  1640  CD  ARG  429     48.588  19.674  24.935  1.00 32.08      PROT
ATOM  1641  NE  ARG  429     47.508  19.923  25.880  1.00 42.46      PROT
ATOM  1642  CZ  ARG  429     46.226  19.673  25.631  1.00 48.51      PROT
ATOM  1643  NH1 ARG  429     45.860  19.163  24.459  1.00 33.35      PROT
ATOM  1644  NH2 ARG  429     45.307  19.955  26.549  1.00 46.08      PROT
ATOM  1645  C   ARG  429     52.260  17.557  22.919  1.00 11.77      PROT
ATOM  1646  O   ARG  429     52.298  17.904  21.737  1.00 28.66      PROT
ATOM  1647  N   MET  430     53.343  17.270  23.629  1.00 20.26      PROT
ATOM  1648  CA  MET  430     54.671  17.328  23.042  1.00 21.06      PROT
ATOM  1649  CB  MET  430     55.738  17.015  24.100  1.00 30.24      PROT
ATOM  1650  CG  MET  430     56.061  18.165  25.056  1.00 34.66      PROT
ATOM  1651  SD  MET  430     55.727  19.795  24.373  1.00 35.91      PROT
ATOM  1652  CE  MET  430     56.839  19.814  22.978  1.00 32.52      PROT
ATOM  1653  C   MET  430     54.735  16.302  21.925  1.00 18.70      PROT
ATOM  1654  O   MET  430     55.287  16.560  20.860  1.00 16.59      PROT
ATOM  1655  N   ILE  431     54.161  15.133  22.182  1.00 15.38      PROT
ATOM  1656  CA  ILE  431     54.144  14.069  21.196  1.00 15.85      PROT
ATOM  1657  CB  ILE  431     53.326  12.859  21.705  1.00 13.76      PROT
ATOM  1658  CG2 ILE  431     52.727  12.084  20.539  1.00 11.11      PROT
ATOM  1659  CG1 ILE  431     54.239  11.924  22.489  1.00 11.72      PROT
ATOM  1660  CD1 ILE  431     53.552  11.224  23.615  1.00 16.22      PROT
ATOM  1661  C   ILE  431     53.538  14.609  19.904  1.00 18.49      PROT
ATOM  1662  O   ILE  431     54.134  14.483  18.839  1.00 17.36      PROT
ATOM  1663  N   GLY  432     52.361  15.220  20.003  1.00  2.00      PROT
ATOM  1664  CA  GLY  432     51.721  15.772  18.831  1.00  2.00      PROT
ATOM  1665  C   GLY  432     52.542  16.851  18.148  1.00 10.55      PROT
```

ATOM 1666 O GLY 432 52.707 16.834 16.936 1.00 9.60 PROT
ATOM 1667 N ALA 433 53.043 17.805 18.926 1.00 11.17 PROT
ATOM 1668 CA ALA 433 53.855 18.884 18.385 1.00 2.00 PROT
ATOM 1669 CB ALA 433 54.326 19.771 19.506 1.00 2.00 PROT
ATOM 1670 C ALA 433 55.050 18.285 17.646 1.00 6.43 PROT
ATOM 1671 O- ALA 433 55.493 18.789 16.623 1.00 11.71 PROT
ATOM 1672 N CYS 434 55.579 17.197 18.179 1.00 15.71 PROT
ATOM 1673 CA CYS 434 56.715 16.534 17.573 1.00 13.44 PROT
ATOM 1674 CB CYS 434 57.228 15.464 18.518 1.00 14.76 PROT
ATOM 1675 SG CYS 434 58.910 15.703 18.985 1.00 20.82 PROT
ATOM 1676 C CYS 434 56.269 15.902 16.264 1.00 9.28 PROT
ATOM 1677 O CYS 434 56.969 15.948 15.256 1.00 8.50 PROT
ATOM 1678 N HIS 435 55.091 15.300 16.298 1.00 11.04 PROT
ATOM 1679 CA HIS 435 54.533 14.657 15.122 1.00 11.30 PROT
ATOM 1680 CB HIS 435 53.142 14.132 15.438 1.00 4.30 PROT
ATOM 1681 CG HIS 435 52.480 13.460 14.283 1.00 13.68 PROT
ATOM 1682 CD2 HIS 435 52.751 12.288 13.662 1.00 4.72 PROT
ATOM 1683 ND1 HIS 435 51.358 13.976 13.666 1.00 5.53 PROT
ATOM 1684 CE1 HIS 435 50.966 13.147 12.717 1.00 12.84 PROT
ATOM 1685 NE2 HIS 435 51.794 12.116 12.694 1.00 15.77 PROT
ATOM 1686 C HIS 435 54.482 15.661 13.973 1.00 8.50 PROT
ATOM 1687 O HIS 435 54.941 15.370 12.869 1.00 14.82 PROT
ATOM 1688 N ALA 436 53.938 16.844 14.245 1.00 5.74 PROT
ATOM 1689 CA ALA 436 53.843 17.905 13.252 1.00 2.00 PROT
ATOM 1690 CB ALA 436 53.632 19.241 13.942 1.00 2.00 PROT
ATOM 1691 C ALA 436 55.121 17.934 12.406 1.00 8.68 PROT
ATOM 1692 O ALA 436 55.080 17.712 11.193 1.00 15.14 PROT
ATOM 1693 N SER 437 56.256 18.189 13.047 1.00 6.82 PROT
ATOM 1694 CA SER 437 57.522 18.226 12.337 1.00 9.05 PROT
ATOM 1695 CB SER 437 58.671 18.511 13.295 1.00 2.00 PROT
ATOM 1696 OG SER 437 59.593 19.406 12.699 1.00 21.18 PROT
ATOM 1697 C SER 437 57.758 16.896 11.637 1.00 15.18 PROT
ATOM 1698 O SER 437 58.076 16.849 10.445 1.00 19.33 PROT
ATOM 1699 N ARG 438 57.607 15.805 12.373 1.00 16.98 PROT
ATOM 1700 CA ARG 438 57.799 14.501 11.766 1.00 16.98 PROT
ATOM 1701 CB ARG 438 57.294 13.409 12.702 1.00 24.77 PROT
ATOM 1702 CG ARG 438 58.006 12.086 12.534 1.00 33.76 PROT
ATOM 1703 CD ARG 438 59.506 12.280 12.614 1.00 30.64 PROT
ATOM 1704 NE ARG 438 60.219 11.380 11.721 1.00 29.76 PROT
ATOM 1705 CZ ARG 438 61.505 11.504 11.423 1.00 25.21 PROT
ATOM 1706 NH1 ARG 438 62.077 10.641 10.603 1.00 39.58 PROT
ATOM 1707 NH2 ARG 438 62.217 12.492 11.942 1.00 14.13 PROT
ATOM 1708 C ARG 438 57.031 14.441 10.448 1.00 16.49 PROT
ATOM 1709 O ARG 438 57.563 14.008 9.424 1.00 15.57 PROT
ATOM 1710 N PHE 439 55.781 14.893 10.484 1.00 16.75 PROT
ATOM 1711 CA PHE 439 54.933 14.878 9.303 1.00 21.63 PROT

ATOM 1712 CB PHE 439 53.603 15.575 9.574 1.00 17.84 PROT
ATOM 1713 CG PHE 439 52.597 15.364 8.490 1.00 20.60 PROT
ATOM 1714 CD1 PHE 439 52.042 14.103 8.279 1.00 30.60 PROT
ATOM 1715 CD2 PHE 439 52.265 16.394 7.622 1.00 14.95 PROT
ATOM 1716 CE1 PHE 439 51.175 13.867 7.206 1.00 29.12 PROT
ATOM 1717 CE2 PHE 439 51.404 16.173 6.552 1.00 25.18 PROT
ATOM 1718 CZ PHE 439 50.860 14.905 6.341 1.00 27.82 PROT
ATOM 1719 C PHE 439 55.620 15.548 8.130 1.00 28.17 PROT
ATOM 1720 O PHE 439 55.512 15.095 6.987 1.00 28.83 PROT
ATOM 1721 N LEU 440 56.328 16.633 8.427 1.00 26.77 PROT
ATOM 1722 CA LEU 440 57.055 17.382 7.418 1.00 24.66 PROT
ATOM 1723 CB LEU 440 57.555 18.696 8.005 1.00 10.80 PROT
ATOM 1724 CG LEU 440 56.501 19.658 8.541 1.00 8.60 PROT
ATOM 1725 CD1 LEU 440 57.152 20.985 8.855 1.00 17.69 PROT
ATOM 1726 CD2 LEU 440 55.410 19.847 7.522 1.00 15.71 PROT
ATOM 1727 C LEU 440 58.245 16.578 6.912 1.00 29.61 PROT
ATOM 1728 O LEU 440 58.506 16.526 5.718 1.00 32.37 PROT
ATOM 1729 N HIS 441 58.971 15.954 7.830 1.00 28.12 PROT
ATOM 1730 CA HIS 441 60.140 15.172 7.460 1.00 28.51 PROT
ATOM 1731 CB HIS 441 60.783 14.564 8.705 1.00 36.77 PROT
ATOM 1732 C HIS 441 59.724 14.081 6.497 1.00 31.94 PROT
ATOM 1733 O HIS 441 60.461 13.725 5.579 1.00 49.29 PROT
ATOM 1734 N MET 442 58.533 13.545 6.711 1.00 41.16 PROT
ATOM 1735 CA MET 442 58.033 12.487 5.854 1.00 39.99 PROT
ATOM 1736 CB MET 442 56.871 11.776 6.551 1.00 38.32 PROT
ATOM 1737 CG MET 442 57.263 11.122 7.860 1.00 19.20 PROT
ATOM 1738 SD MET 442 55.859 10.350 8.675 1.00 38.06 PROT
ATOM 1739 CE MET 442 54.906 11.767 9.073 1.00 21.45 PROT
ATOM 1740 C MET 442 57.599 13.031 4.495 1.00 35.68 PROT
ATOM 1741 O MET 442 57.887 12.431 3.461 1.00 27.43 PROT
ATOM 1742 N LYS 443 56.920 14.175 4.503 1.00 34.17 PROT
ATOM 1743 CA LYS 443 56.447 14.796 3.268 1.00 34.33 PROT
ATOM 1744 CB LYS 443 55.767 16.129 3.574 1.00 21.68 PROT
ATOM 1745 CG LYS 443 54.303 15.989 3.953 1.00 26.95 PROT
ATOM 1746 CD LYS 443 53.497 17.231 3.602 1.00 30.78 PROT
ATOM 1747 CE LYS 443 52.204 16.848 2.861 1.00 56.06 PROT
ATOM 1748 NZ LYS 443 50.931 17.261 3.564 1.00 45.26 PROT
ATOM 1749 C LYS 443 57.570 15.007 2.251 1.00 37.81 PROT
ATOM 1750 O LYS 443 57.325 15.049 1.041 1.00 38.26 PROT
ATOM 1751 N VAL 444 58.798 15.130 2.741 1.00 25.12 PROT
ATOM 1752 CA VAL 444 59.942 15.318 1.867 1.00 25.43 PROT
ATOM 1753 CB VAL 444 60.802 16.531 2.334 1.00 29.15 PROT
ATOM 1754 CG1 VAL 444 59.893 17.621 2.861 1.00 29.48 PROT
ATOM 1755 CG2 VAL 444 61.785 16.121 3.419 1.00 36.65 PROT
ATOM 1756 C VAL 444 60.786 14.042 1.825 1.00 30.03 PROT
ATOM 1757 O VAL 444 62.009 14.099 1.698 1.00 39.43 PROT

ATOM 1758 N GLU 445 60.127 12.888 1.903 1.00 39.84 PROT
ATOM 1759 CA GLU 445 60.842 11.612 1.896 1.00 43.07 PROT
ATOM 1760 CB GLU 445 61.429 11.360 3.282 1.00 50.55 PROT
ATOM 1761 CG GLU 445 62.399 10.203 3.351 1.00 77.00 PROT
ATOM 1762 CD GLU 445 63.569 10.495 4.267 1.00 98.21 PROT
ATOM 1763 OE1 GLU 445 64.251 9.538 4.701 1.00100.00 PROT
ATOM 1764 OE2 GLU 445 63.804 11.690 4.554 1.00100.00 PROT
ATOM 1765 C GLU 445 59.989 10.408 1.491 1.00 43.41 PROT
ATOM 1766 O GLU 445 60.466 9.274 1.511 1.00 48.80 PROT
ATOM 1767 N CYS 446 58.731 10.644 1.137 1.00 38.17 PROT
ATOM 1768 CA CYS 446 57.852 9.548 0.743 1.00 41.38 PROT
ATOM 1769 CB CYS 446 57.066 9.035 1.965 1.00 40.61 PROT
ATOM 1770 SG CYS 446 58.062 8.276 3.320 1.00 44.73 PROT
ATOM 1771 C CYS 446 56.886 10.003 -0.362 1.00 45.83 PROT
ATOM 1772 O CYS 446 56.466 11.184 -0.323 1.00 44.17 PROT
ATOM 1773 OT CYS 446 56.570 9.180 -1.259 1.00 40.79 PROT
ATOM 1774 CB GLU 449 52.635 12.140 -2.649 1.00 28.60 PROT
ATOM 1775 C GLU 449 52.019 10.014 -1.526 1.00 38.06 PROT
ATOM 1776 O GLU 449 50.873 10.220 -1.935 1.00 43.52 PROT
ATOM 1777 N GLU 449 54.378 10.460 -2.167 1.00 17.78 PROT
ATOM 1778 CA GLU 449 53.105 11.069 -1.689 1.00 33.80 PROT
ATOM 1779 N LEU 450 52.387 8.880 -0.936 1.00 46.88 PROT
ATOM 1780 CA LEU 450 51.432 7.808 -0.696 1.00 52.62 PROT
ATOM 1781 CB LEU 450 52.101 6.436 -0.850 1.00 57.50 PROT
ATOM 1782 CG LEU 450 53.338 6.066 -0.028 1.00 59.81 PROT
ATOM 1783 CD1 LEU 450 53.613 4.573 -0.198 1.00 51.33 PROT
ATOM 1784 CD2 LEU 450 54.544 6.890 -0.473 1.00 57.03 PROT
ATOM 1785 C LEU 450 50.850 7.970 0.711 1.00 50.65 PROT
ATOM 1786 O LEU 450 50.965 7.091 1.569 1.00 38.49 PROT
ATOM 1787 N PHE 451 50.225 9.123 0.923 1.00 32.24 PROT
ATOM 1788 CA PHE 451 49.602 9.478 2.188 1.00 32.64 PROT
ATOM 1789 CB PHE 451 50.091 10.857 2.648 1.00 56.06 PROT
ATOM 1790 CG PHE 451 51.534 10.895 3.056 1.00 61.73 PROT
ATOM 1791 CD1 PHE 451 52.523 10.366 2.235 1.00 66.92 PROT
ATOM 1792 CD2 PHE 451 51.905 11.486 4.256 1.00 58.76 PROT
ATOM 1793 CE1 PHE 451 53.860 10.430 2.604 1.00 69.17 PROT
ATOM 1794 CE2 PHE 451 53.231 11.556 4.635 1.00 61.48 PROT
ATOM 1795 CZ PHE 451 54.214 11.028 3.809 1.00 71.95 PROT
ATOM 1796 C PHE 451 48.081 9.548 2.025 1.00 30.67 PROT
ATOM 1797 O PHE 451 47.571 10.429 1.324 1.00 38.49 PROT
ATOM 1798 N PRO 452 47.336 8.627 2.672 1.00 19.14 PROT
ATOM 1799 CD PRO 452 47.774 7.495 3.510 1.00 24.21 PROT
ATOM 1800 CA PRO 452 45.881 8.672 2.538 1.00 5.88 PROT
ATOM 1801 CB PRO 452 45.397 7.742 3.633 1.00 16.92 PROT
ATOM 1802 CG PRO 452 46.496 6.737 3.761 1.00 16.91 PROT
ATOM 1803 C PRO 452 45.354 10.090 2.687 1.00 15.15 PROT

ATOM 1804 O PRO 452 45.879 10.886 3.463 1.00 22.59 PROT
ATOM 1805 N PRO 453 44.315 10.429 1.920 1.00 18.37 PROT
ATOM 1806 CD PRO 453 43.653 9.540 0.951 1.00 3.83 PROT
ATOM 1807 CA PRO 453 43.710 11.766 1.960 1.00 14.00 PROT
ATOM 1808 CB PRO 453 42.502 11.649 1.032 1.00 20.04 PROT
ATOM 1809 CG PRO 453 42.316 10.163 0.807 1.00 19.43 PROT
ATOM 1810 C PRO 453 43.321 12.277 3.346 1.00 14.70 PROT
ATOM 1811 O PRO 453 43.609 13.422 3.682 1.00 9.70 PROT
ATOM 1812 N LEU 454 42.667 11.446 4.152 1.00 25.39 PROT
ATOM 1813 CA LEU 454 42.261 11.886 5.491 1.00 28.61 PROT
ATOM 1814 CB LEU 454 41.463 10.804 6.217 1.00 17.29 PROT
ATOM 1815 CG LEU 454 40.893 11.224 7.572 1.00 9.05 PROT
ATOM 1816 CD1 LEU 454 40.174 12.547 7.435 1.00 17.23 PROT
ATOM 1817 CD2 LEU 454 39.946 10.148 8.079 1.00 8.05 PROT
ATOM 1818 C LEU 454 43.479 12.234 6.316 1.00 23.36 PROT
ATOM 1819 O LEU 454 43.484 13.225 7.037 1.00 10.99 PROT
ATOM 1820 N PHE 455 44.503 11.394 6.205 1.00 14.26 PROT
ATOM 1821 CA PHE 455 45.769 11.595 6.902 1.00 15.33 PROT
ATOM 1822 CB PHE 455 46.761 10.496 6.501 1.00 26.32 PROT
ATOM 1823 CG PHE 455 48.138 10.644 7.108 1.00 43.03 PROT
ATOM 1824 CD1 PHE 455 48.305 11.094 8.414 1.00 43.52 PROT
ATOM 1825 CD2 PHE 455 49.270 10.282 6.380 1.00 41.44 PROT
ATOM 1826 CE1 PHE 455 49.576 11.176 8.987 1.00 37.77 PROT
ATOM 1827 CE2 PHE 455 50.536 10.363 6.947 1.00 49.43 PROT
ATOM 1828 CZ PHE 455 50.686 10.811 8.255 1.00 39.99 PROT
ATOM 1829 C PHE 455 46.313 12.956 6.500 1.00 19.37 PROT
ATOM 1830 O PHE 455 46.945 13.646 7.298 1.00 29.31 PROT
ATOM 1831 N LEU 456 46.048 13.345 5.257 1.00 17.16 PROT
ATOM 1832 CA LEU 456 46.527 14.625 4.750 1.00 20.15 PROT
ATOM 1833 CB LEU 456 46.572 14.603 3.218 1.00 35.14 PROT
ATOM 1834 CG LEU 456 47.593 13.660 2.568 1.00 40.45 PROT
ATOM 1835 CD1 LEU 456 47.233 13.456 1.116 1.00 44.38 PROT
ATOM 1836 CD2 LEU 456 48.990 14.234 2.680 1.00 34.88 PROT
ATOM 1837 C LEU 456 45.680 15.800 5.226 1.00 20.37 PROT
ATOM 1838 O LEU 456 46.207 16.866 5.548 1.00 29.61 PROT
ATOM 1839 N GLU 457 44.367 15.607 5.280 1.00 13.06 PROT
ATOM 1840 CA GLU 457 43.483 16.675 5.713 1.00 14.14 PROT
ATOM 1841 CB GLU 457 42.037 16.256 5.516 1.00 29.57 PROT
ATOM 1842 C GLU 457 43.731 17.058 7.173 1.00 14.95 PROT
ATOM 1843 O GLU 457 43.771 18.237 7.514 1.00 15.98 PROT
ATOM 1844 N VAL 458 43.901 16.051 8.026 1.00 26.34 PROT
ATOM 1845 CA VAL 458 44.143 16.260 9.455 1.00 24.39 PROT
ATOM 1846 CB VAL 458 44.219 14.910 10.208 1.00 20.14 PROT
ATOM 1847 CG1 VAL 458 44.882 15.102 11.554 1.00 22.01 PROT
ATOM 1848 CG2 VAL 458 42.831 14.341 10.400 1.00 28.11 PROT
ATOM 1849 C VAL 458 45.417 17.039 9.778 1.00 21.50 PROT

ATOM	1850	O	VAL	458	45.364	18.062	10.439	1.00 18.85	PROT
ATOM	1851	N	PHE	459	46.557	16.546	9.308	1.00 16.05	PROT
ATOM	1852	CA	PHE	459	47.840	17.174	9.586	1.00 20.28	PROT
ATOM	1853	CB	PHE	459	48.862	16.072	9.846	1.00 20.26	PROT
ATOM	1854	CG	PHE	459	48.389	15.055	10.833	1.00 27.22	PROT
ATOM	1855	CD1	PHE	459	47.917	13.822	10.408	1.00 28.01	PROT
ATOM	1856	CD2	PHE	459	48.390	15.339	12.204	1.00 40.66	PROT
ATOM	1857	CE1	PHE	459	47.447	12.876	11.334	1.00 21.78	PROT
ATOM	1858	CE2	PHE	459	47.922	14.402	13.140	1.00 25.98	PROT
ATOM	1859	CZ	PHE	459	47.450	13.172	12.702	1.00 17.63	PROT
ATOM	1860	C	PHE	459	48.381	18.152	8.540	1.00 23.03	PROT
ATOM	1861	O	PHE	459	49.601	18.311	8.416	1.00 27.34	PROT
ATOM	1862	N	GLU	460	47.480	18.816	7.815	1.00 33.88	PROT
ATOM	1863	CA	GLU	460	47.846	19.774	6.767	1.00 36.60	PROT
ATOM	1864	CB	GLU	460	48.930	20.732	7.257	1.00 46.04	PROT
ATOM	1865	CG	GLU	460	48.406	21.899	8.054	1.00 67.27	PROT
ATOM	1866	CD	GLU	460	47.298	22.636	7.339	1.00 71.34	PROT
ATOM	1867	OE1	GLU	460	47.448	23.859	7.121	1.00 71.99	PROT
ATOM	1868	OE2	GLU	460	46.280	21.993	6.998	1.00 72.73	PROT
ATOM	1869	C	GLU	460	48.353	19.037	5.535	1.00 46.31	PROT
ATOM	1870	O	GLU	460	48.642	17.829	5.655	1.00 51.79	PROT
ATOM	1871	OT	GLU	460	48.461	19.669	4.462	1.00 60.92	PROT
ATOM	1872	C1	GC1	1	47.011	4.539	15.912	1.00 29.38	LIGA
ATOM	1873	C2	GC1	1	51.292	6.537	13.571	1.00 17.11	LIGA
ATOM	1874	C3	GC1	1	47.393	4.205	14.573	1.00 33.72	LIGA
ATOM	1875	C4	GC1	1	52.119	6.409	12.400	1.00 19.76	LIGA
ATOM	1876	C5	GC1	1	48.689	4.481	14.089	1.00 25.02	LIGA
ATOM	1877	C6	GC1	1	52.344	7.525	11.539	1.00 17.51	LIGA
ATOM	1878	C7	GC1	1	49.684	5.122	14.949	1.00 23.99	LIGA
ATOM	1879	C8	GC1	1	51.722	8.778	11.873	1.00 20.21	LIGA
ATOM	1880	C9	GC1	1	49.283	5.452	16.318	1.00 18.19	LIGA
ATOM	1881	C10	GC1	1	50.906	8.928	13.018	1.00 15.43	LIGA
ATOM	1882	C11	GC1	1	47.973	5.163	16.779	1.00 30.64	LIGA
ATOM	1883	C12	GC1	1	50.696	7.827	13.850	1.00 25.06	LIGA
ATOM	1884	O5	GC1	1	45.700	4.254	16.325	1.00 28.60	LIGA
ATOM	1885	C14	GC1	1	53.198	7.459	10.291	1.00 20.30	LIGA
ATOM	1886	C15	GC1	1	45.305	3.866	17.666	1.00 18.51	LIGA
ATOM	1887	C16	GC1	1	52.423	6.824	9.131	1.00 17.21	LIGA
ATOM	1888	C17	GC1	1	43.816	4.078	17.872	1.00 21.43	LIGA
ATOM	1889	C18	GC1	1	54.514	6.689	10.543	1.00 24.97	LIGA
ATOM	1890	C19	GC1	1	48.994	4.093	12.664	1.00 33.46	LIGA
ATOM	1891	C20	GC1	1	50.243	6.110	17.278	1.00 27.69	LIGA
ATOM	1892	O1	GC1	1	51.902	9.861	11.086	1.00 23.34	LIGA
ATOM	1893	C21	GC1	1	51.026	5.430	14.458	1.00 22.49	LIGA
ATOM	1894	O3	GC1	1	43.147	3.117	18.247	1.00 18.06	LIGA
ATOM	1895	O4	GC1	1	43.331	5.204	17.665	1.00 28.27	LIGA

END

APPENDIX 8

TRBGC1.PDB

```
REMARK TR-beta GC-2 Full length numbering
REMARK refinement resolution: 100.00 - 2.40 A  starting r= 0.2602 free_r= 0.2960
REMARK                -                 final    r= 0.2532 free_r= 0.2894
REMARK sg= P3(1)21 a= 68.9 b= 68.9 c= 131.5 alpha= 90 beta= 90 gamma= 120
REMARK theoretical total number of refl. in resol. range:     14710 ( 100.0 % )
REMARK number of unobserved reflections (no entry or |F|=0):    336 (  2.3 % )
REMARK number of reflections rejected:                            0 (  0.0 % )
REMARK total number of reflections used:                      14374 ( 97.7 % )
REMARK number of reflections in working set:                  13656 ( 92.8 % )
REMARK number of reflections in test set:                       718 (  4.9 % )
REMARK
REMARK ALA 199 to ALA 201 from His-tag
REMARK
REMARK Four cacodylate-modified cysteines (CYA)
REMARK Cys294, Cys298, Cys388, Cys434
REMARK cacodylate modeled as single arsenic atom
REMARK
REMARK side chain of certain residues modeled as ALA due to poor density;
REMARK however, residue name reflects true residue for clarity
REMARK
REMARK amino acid sequence confirmed,
REMARK differing from that reported by Weinberger et. al.
REMARK in the following codons:
REMARK 243 Pro - Arg
REMARK 337 Ile - Thr
REMARK 451 Leu - Phe
REMARK as reported by Sakurai et. al.
REMARK note also correction of initiation codon,
REMARK yielding a polypeptide of 461 amino acids

JRNL  AUTH A.SAKURAI,A.NAKAI,L.J.DEGROOT
JRNL  TITL STRUCTURAL ANALYSIS OF HUMAN THYROID HORMONE RECEPTOR
JRNL  TITL2 BETA GENE
JRNL  REF MOL.CELL.ENDO.   V.71  1990
JRNL  AUTH C.WEINBERGER, C.C.THOMPSON,R.LEBO,D.J.GRUOL,R.M.EVANS
JRNL  TITL  THE C-ERB-A GENE ENCODES A THYROID HORMONE RECEPTOR
JRNL  REF   NATURE              V.324 6098 1986

ATOM     1  CB  ALA   199      36.564  26.104  43.169  1.00 73.87
ATOM     2  C   ALA   199      34.723  26.996  44.613  1.00 78.22
ATOM     3  O   ALA   199      34.741  28.230  44.568  1.00 81.84
ATOM     4  N   ALA   199      34.389  26.744  42.166  1.00 77.76
ATOM     5  CA  ALA   199      35.048  26.165  43.375  1.00 77.98
```

```
ATOM      6  N   ALA   200      34.428  26.309  45.713  1.00 77.78
ATOM      7  CA  ALA   200      34.098  26.961  46.984  1.00 77.03
ATOM      8  CB  ALA   200      32.761  27.693  46.865  1.00 79.04
ATOM      9  C   ALA   200      34.028  25.897  48.084  1.00 75.79
ATOM     10  O   ALA   200      34.877  25.857  48.978  1.00 71.58
ATOM     11  N   ALA   201      33.005  25.050  48.010  1.00 73.70
ATOM     12  CA  ALA   201      32.838  23.968  48.972  1.00 70.15
ATOM     13  CB  ALA   201      31.468  23.328  48.809  1.00 71.16
ATOM     14  C   ALA   201      33.934  22.963  48.642  1.00 67.54
ATOM     15  O   ALA   201      34.218  22.044  49.413  1.00 67.14
ATOM     16  N   GLU   202      34.540  23.164  47.476  1.00 62.05
ATOM     17  CA  GLU   202      35.624  22.325  46.975  1.00 59.45
ATOM     18  CB  GLU   202      35.835  22.621  45.482  1.00 55.12
ATOM     19  CG  GLU   202      36.820  21.716  44.749  1.00 56.25
ATOM     20  CD  GLU   202      36.382  20.260  44.723  1.00 54.99
ATOM     21  OE1 GLU   202      35.216  19.990  44.361  1.00 53.83
ATOM     22  OE2 GLU   202      37.210  19.385  45.050  1.00 59.90
ATOM     23  C   GLU   202      36.885  22.674  47.770  1.00 55.96
ATOM     24  O   GLU   202      37.472  21.823  48.435  1.00 52.90
ATOM     25  N   GLU   203      37.282  23.943  47.698  1.00 54.95
ATOM     26  CA  GLU   203      38.464  24.434  48.390  1.00 55.59
ATOM     27  CB  GLU   203      38.632  25.924  48.126  1.00 53.21
ATOM     28  C   GLU   203      38.415  24.171  49.894  1.00 56.30
ATOM     29  O   GLU   203      39.445  23.948  50.526  1.00 58.70
ATOM     30  N   LEU   204      37.213  24.193  50.462  1.00 57.14
ATOM     31  CA  LEU   204      37.038  23.966  51.893  1.00 56.93
ATOM     32  CB  LEU   204      35.658  24.465  52.338  1.00 58.31
ATOM     33  CG  LEU   204      35.348  24.508  53.839  1.00 51.69
ATOM     34  CD1 LEU   204      36.314  25.446  54.549  1.00 44.38
ATOM     35  CD2 LEU   204      33.920  24.986  54.039  1.00 52.44
ATOM     36  C   LEU   204      37.198  22.489  52.246  1.00 58.20
ATOM     37  O   LEU   204      37.831  22.155  53.252  1.00 58.99
ATOM     38  N   GLN   205      36.620  21.607  51.431  1.00 58.26
ATOM     39  CA  GLN   205      36.736  20.167  51.657  1.00 55.38
ATOM     40  CB  GLN   205      35.993  19.377  50.584  1.00 54.52
ATOM     41  CG  GLN   205      34.498  19.324  50.741  1.00 53.33
ATOM     42  CD  GLN   205      33.854  18.520  49.629  1.00 53.40
ATOM     43  OE1 GLN   205      33.850  18.939  48.473  1.00 51.68
ATOM     44  NE2 GLN   205      33.325  17.352  49.968  1.00 51.34
ATOM     45  C   GLN   205      38.200  19.775  51.608  1.00 55.05
ATOM     46  O   GLN   205      38.665  18.964  52.407  1.00 53.63
ATOM     47  N   LYS   206      38.918  20.348  50.648  1.00 53.55
ATOM     48  CA  LYS   206      40.337  20.078  50.493  1.00 57.40
ATOM     49  CB  LYS   206      40.896  20.814  49.269  1.00 58.94
ATOM     50  CG  LYS   206      40.300  20.375  47.941  1.00 67.73
ATOM     51  CD  LYS   206      40.921  21.141  46.781  1.00 72.50
```

ATOM 52 CE LYS 206 40.346 20.695 45.445 1.00 75.60
ATOM 53 NZ LYS 206 40.945 21.445 44.304 1.00 77.08
ATOM 54 C LYS 206 41.053 20.559 51.747 1.00 53.98
ATOM 55 O LYS 206 41.905 19.866 52.300 1.00 53.49
ATOM 56 N SER 207 40.680 21.757 52.184 1.00 53.61
ATOM 57 CA SER 207 41.254 22.386 53.364 1.00 51.49
ATOM 58 CB SER 207 40.546 23.715 53.619 1.00 51.01
ATOM 59 OG SER 207 41.108 24.383 54.731 1.00 63.00
ATOM 60 C SER 207 41.178 21.502 54.616 1.00 49.49
ATOM 61 O SER 207 42.073 21.538 55.465 1.00 47.44
ATOM 62 N ILE 208 40.117 20.707 54.725 1.00 44.39
ATOM 63 CA ILE 208 39.938 19.829 55.874 1.00 45.99
ATOM 64 CB ILE 208 38.421 19.627 56.174 1.00 44.50
ATOM 65 CG2 ILE 208 38.226 18.801 57.445 1.00 49.37
ATOM 66 CG1 ILE 208 37.766 20.993 56.385 1.00 42.73
ATOM 67 CD1 ILE 208 36.266 20.941 56.567 1.00 44.13
ATOM 68 C ILE 208 40.614 18.477 55.643 1.00 47.80
ATOM 69 O ILE 208 40.735 17.666 56.562 1.00 49.81
ATOM 70 N GLY 209 41.059 18.238 54.412 1.00 51.31
ATOM 71 CA GLY 209 41.728 16.983 54.107 1.00 46.85
ATOM 72 C GLY 209 40.813 15.896 53.573 1.00 48.31
ATOM 73 O GLY 209 41.203 14.730 53.485 1.00 47.75
ATOM 74 N HIS 210 39.582 16.274 53.237 1.00 46.79
ATOM 75 CA HIS 210 38.622 15.326 52.686 1.00 47.34
ATOM 76 CB HIS 210 37.200 15.739 53.068 1.00 49.39
ATOM 77 C HIS 210 38.796 15.350 51.162 1.00 45.47
ATOM 78 O HIS 210 38.924 16.420 50.566 1.00 41.32
ATOM 79 N LYS 211 38.829 14.176 50.545 1.00 45.76
ATOM 80 CA LYS 211 38.991 14.095 49.090 1.00 43.42
ATOM 81 CB LYS 211 39.892 12.910 48.715 1.00 46.72
ATOM 82 CG LYS 211 41.210 12.815 49.497 1.00 56.48
ATOM 83 CD LYS 211 42.068 14.089 49.486 1.00 60.93
ATOM 84 CE LYS 211 42.562 14.496 48.103 1.00 61.95
ATOM 85 NZ LYS 211 41.485 15.024 47.218 1.00 69.93
ATOM 86 C LYS 211 37.609 13.917 48.473 1.00 35.68
ATOM 87 O LYS 211 37.019 12.847 48.557 1.00 33.58
ATOM 88 N PRO 212 37.077 14.972 47.828 1.00 35.64
ATOM 89 CD PRO 212 37.654 16.304 47.584 1.00 38.60
ATOM 90 CA PRO 212 35.748 14.896 47.211 1.00 38.35
ATOM 91 CB PRO 212 35.537 16.318 46.682 1.00 38.95
ATOM 92 CG PRO 212 36.409 17.156 47.604 1.00 42.00
ATOM 93 C PRO 212 35.635 13.865 46.096 1.00 38.78
ATOM 94 O PRO 212 36.546 13.714 45.280 1.00 34.64
ATOM 95 N GLU 213 34.517 13.153 46.077 1.00 40.31
ATOM 96 CA GLU 213 34.256 12.160 45.049 1.00 43.87
ATOM 97 CB GLU 213 33.722 10.873 45.684 1.00 45.16

ATOM 98 CG GLU 213 34.616 10.344 46.800 1.00 47.60
ATOM 99 CD GLU 213 34.404 8.870 47.088 1.00 50.68
ATOM 100 OE1 GLU 213 33.240 8.416 47.072 1.00 59.18
ATOM 101 OE2 GLU 213 35.402 8.167 47.353 1.00 49.06
ATOM 102 C GLU 213 33.234 12.796 44.083 1.00 45.96
ATOM 103 O GLU 213 32.703 13.876 44.368 1.00 43.13
ATOM 104 N PRO 214 32.953 12.154 42.933 1.00 46.52
ATOM 105 CD PRO 214 33.459 10.884 42.391 1.00 46.44
ATOM 106 CA PRO 214 31.995 12.737 41.982 1.00 47.52
ATOM 107 CB PRO 214 32.040 11.750 40.813 1.00 45.40
ATOM 108 CG PRO 214 33.445 11.181 40.913 1.00 49.89
ATOM 109 C PRO 214 30.564 12.969 42.465 1.00 45.70
ATOM 110 O PRO 214 29.972 12.112 43.121 1.00 44.49
ATOM 111 N THR 215 30.013 14.136 42.129 1.00 45.24
ATOM 112 CA THR 215 28.629 14.447 42.483 1.00 49.36
ATOM 113 CB THR 215 28.312 15.949 42.330 1.00 44.86
ATOM 114 OG1 THR 215 28.253 16.285 40.942 1.00 52.26
ATOM 115 CG2 THR 215 29.387 16.793 42.992 1.00 39.43
ATOM 116 C THR 215 27.791 13.673 41.464 1.00 52.51
ATOM 117 O THR 215 28.326 13.192 40.465 1.00 53.48
ATOM 118 N ASP 216 26.491 13.543 41.712 1.00 58.81
ATOM 119 CA ASP 216 25.603 12.810 40.805 1.00 61.51
ATOM 120 CB ASP 216 24.150 12.941 41.270 1.00 70.57
ATOM 121 CG ASP 216 23.902 12.257 42.595 1.00 78.07
ATOM 122 OD1 ASP 216 24.042 11.018 42.660 1.00 82.31
ATOM 123 OD2 ASP 216 23.572 12.962 43.571 1.00 86.55
ATOM 124 C ASP 216 25.706 13.277 39.356 1.00 58.42
ATOM 125 O ASP 216 25.695 12.464 38.429 1.00 56.85
ATOM 126 N GLU 217 25.798 14.587 39.167 1.00 54.92
ATOM 127 CA GLU 217 25.905 15.156 37.833 1.00 53.37
ATOM 128 CB GLU 217 25.861 16.682 37.906 1.00 51.02
ATOM 129 C GLU 217 27.211 14.692 37.195 1.00 53.55
ATOM 130 O GLU 217 27.239 14.301 36.027 1.00 54.33
ATOM 131 N GLU 218 28.290 14.726 37.975 1.00 49.20
ATOM 132 CA GLU 218 29.593 14.310 37.486 1.00 45.94
ATOM 133 CB GLU 218 30.674 14.601 38.530 1.00 43.43
ATOM 134 CG GLU 218 30.787 16.069 38.878 1.00 40.86
ATOM 135 CD GLU 218 31.930 16.347 39.826 1.00 39.88
ATOM 136 OE1 GLU 218 32.000 15.667 40.875 1.00 37.61
ATOM 137 OE2 GLU 218 32.748 17.250 39.529 1.00 34.01
ATOM 138 C GLU 218 29.624 12.838 37.101 1.00 44.71
ATOM 139 O GLU 218 30.275 12.471 36.130 1.00 45.31
ATOM 140 N TRP 219 28.935 11.991 37.863 1.00 44.02
ATOM 141 CA TRP 219 28.892 10.572 37.539 1.00 46.97
ATOM 142 CB TRP 219 28.183 9.762 38.630 1.00 48.42
ATOM 143 CG TRP 219 29.034 9.473 39.823 1.00 54.61

ATOM 144 CD2 TRP 219 30.167 8.572 39.879 1.00 55.24
ATOM 145 CE2 TRP 219 30.659 8.610 41.201 1.00 53.67
ATOM 146 CE3 TRP 219 30.795 7.745 38.938 1.00 54.55
ATOM 147 CD1 TRP 219 28.902 10.000 41.074 1.00 55.75
ATOM 148 NE1 TRP 219 29.868 9.491 41.912 1.00 54.43
ATOM 149 CZ2 TRP 219 31.771 7.846 41.622 1.00 52.54
ATOM 150 CZ3 TRP 219 31.912 6.975 39.353 1.00 55.17
ATOM 151 CH2 TRP 219 32.380 7.038 40.690 1.00 55.59
ATOM 152 C TRP 219 28.167 10.356 36.216 1.00 47.32
ATOM 153 O TRP 219 28.433 9.384 35.503 1.00 43.56
ATOM 154 N GLU 220 27.247 11.259 35.898 1.00 49.91
ATOM 155 CA GLU 220 26.497 11.155 34.655 1.00 53.57
ATOM 156 CB GLU 220 25.274 12.075 34.694 1.00 58.18
ATOM 157 CG GLU 220 24.323 11.876 33.526 1.00 73.13
ATOM 158 CD GLU 220 23.082 12.742 33.630 1.00 80.06
ATOM 159 OE1 GLU 220 22.348 12.619 34.636 1.00 82.12
ATOM 160 OE2 GLU 220 22.839 13.545 32.701 1.00 82.78
ATOM 161 C GLU 220 27.419 11.534 33.497 1.00 50.51
ATOM 162 O GLU 220 27.399 10.899 32.443 1.00 49.94
ATOM 163 N LEU 221 28.232 12.567 33.711 1.00 43.71
ATOM 164 CA LEU 221 29.187 13.019 32.702 1.00 42.81
ATOM 165 CB LEU 221 29.868 14.317 33.155 1.00 39.21
ATOM 166 CG LEU 221 30.945 14.949 32.261 1.00 36.34
ATOM 167 CD1 LEU 221 30.339 15.351 30.922 1.00 36.93
ATOM 168 CD2 LEU 221 31.535 16.164 32.949 1.00 24.18
ATOM 169 C LEU 221 30.234 11.928 32.505 1.00 43.46
ATOM 170 O LEU 221 30.618 11.621 31.375 1.00 45.25
ATOM 171 N ILE 222 30.683 11.342 33.614 1.00 39.09
ATOM 172 CA ILE 222 31.677 10.273 33.586 1.00 35.47
ATOM 173 CB ILE 222 32.031 9.811 35.037 1.00 33.74
ATOM 174 CG2 ILE 222 32.822 8.505 35.018 1.00 28.86
ATOM 175 CG1 ILE 222 32.813 10.918 35.745 1.00 33.33
ATOM 176 CD1 ILE 222 33.111 10.646 37.199 1.00 34.85
ATOM 177 C ILE 222 31.139 9.098 32.781 1.00 34.26
ATOM 178 O ILE 222 31.877 8.427 32.070 1.00 31.90
ATOM 179 N LYS 223 29.840 8.860 32.908 1.00 39.49
ATOM 180 CA LYS 223 29.168 7.775 32.210 1.00 44.43
ATOM 181 CB LYS 223 27.696 7.733 32.635 1.00 50.81
ATOM 182 CG LYS 223 26.845 6.693 31.929 1.00 62.51
ATOM 183 CD LYS 223 25.379 6.856 32.313 1.00 72.22
ATOM 184 CE LYS 223 24.487 5.855 31.591 1.00 74.55
ATOM 185 NZ LYS 223 23.045 6.057 31.925 1.00 75.78
ATOM 186 C LYS 223 29.266 7.983 30.691 1.00 42.81
ATOM 187 O LYS 223 29.640 7.078 29.946 1.00 40.36
ATOM 188 N THR 224 28.924 9.194 30.257 1.00 39.89
ATOM 189 CA THR 224 28.948 9.566 28.850 1.00 39.93

ATOM 190 CB THR 224 28.466 11.021 28.680 1.00 40.57
ATOM 191 OG1 THR 224 27.135 11.134 29.197 1.00 39.27
ATOM 192 CG2 THR 224 28.480 11.437 27.214 1.00 38.11
ATOM 193 C THR 224 30.333 9.433 28.234 1.00 39.96
ATOM 194 O THR 224 30.515 8.714 27.248 1.00 36.67
ATOM 195 N VAL 225 31.303 10.123 28.833 1.00 38.02
ATOM 196 CA VAL 225 32.680 10.117 28.355 1.00 38.12
ATOM 197 CB VAL 225 33.565 11.014 29.243 1.00 38.19
ATOM 198 CG1 VAL 225 34.960 11.162 28.632 1.00 36.77
ATOM 199 CG2 VAL 225 32.910 12.361 29.406 1.00 41.76
ATOM 200 C VAL 225 33.291 8.724 28.302 1.00 37.52
ATOM 201 O VAL 225 34.022 8.395 27.364 1.00 36.77
ATOM 202 N THR 226 33.002 7.904 29.310 1.00 34.02
ATOM 203 CA THR 226 33.542 6.552 29.350 1.00 34.67
ATOM 204 CB THR 226 33.237 5.857 30.707 1.00 30.56
ATOM 205 OG1 THR 226 33.858 6.598 31.768 1.00 32.20
ATOM 206 CG2 THR 226 33.775 4.437 30.722 1.00 20.99
ATOM 207 C THR 226 32.960 5.722 28.211 1.00 36.41
ATOM 208 O THR 226 33.698 5.075 27.472 1.00 39.64
ATOM 209 N GLU 227 31.636 5.758 28.073 1.00 39.20
ATOM 210 CA GLU 227 30.935 5.020 27.027 1.00 36.93
ATOM 211 CB GLU 227 29.434 5.296 27.111 1.00 38.06
ATOM 212 C GLU 227 31.466 5.409 25.651 1.00 37.69
ATOM 213 O GLU 227 31.713 4.544 24.805 1.00 40.94
ATOM 214 N ALA 228 31.641 6.709 25.439 1.00 32.86
ATOM 215 CA ALA 228 32.156 7.236 24.177 1.00 32.48
ATOM 216 CB ALA 228 32.285 8.746 24.256 1.00 28.25
ATOM 217 C ALA 228 33.508 6.612 23.861 1.00 36.12
ATOM 218 O ALA 228 33.736 6.135 22.747 1.00 37.86
ATOM 219 N HIS 229 34.404 6.611 24.843 1.00 33.58
ATOM 220 CA HIS 229 35.724 6.029 24.669 1.00 32.97
ATOM 221 CB HIS 229 36.579 6.263 25.921 1.00 33.69
ATOM 222 CG HIS 229 37.857 5.489 25.934 1.00 28.39
ATOM 223 CD2 HIS 229 38.338 4.576 26.811 1.00 28.83
ATOM 224 ND1 HIS 229 38.804 5.593 24.937 1.00 30.47
ATOM 225 CE1 HIS 229 39.812 4.779 25.193 1.00 26.95
ATOM 226 NE2 HIS 229 39.556 4.147 26.332 1.00 31.27
ATOM 227 C HIS 229 35.653 4.536 24.371 1.00 38.40
ATOM 228 O HIS 229 36.227 4.071 23.383 1.00 41.49
ATOM 229 N VAL 230 34.951 3.786 25.216 1.00 38.55
ATOM 230 CA VAL 230 34.823 2.339 25.049 1.00 40.40
ATOM 231 CB VAL 230 33.964 1.726 26.196 1.00 44.68
ATOM 232 CG1 VAL 230 33.865 0.208 26.041 1.00 39.39
ATOM 233 CG2 VAL 230 34.576 2.075 27.540 1.00 42.18
ATOM 234 C VAL 230 34.219 1.934 23.700 1.00 44.28
ATOM 235 O VAL 230 34.640 0.948 23.092 1.00 45.94

```
ATOM   236  N   ALA  231      33.236   2.698  23.230  1.00 45.59
ATOM   237  CA  ALA  231      32.580   2.403  21.961  1.00 47.84
ATOM   238  CB  ALA  231      31.297   3.227  21.832  1.00 45.08
ATOM   239  C   ALA  231      33.487   2.666  20.761  1.00 48.04
ATOM   240  O   ALA  231      33.364   2.012  19.727  1.00 49.95
ATOM   241  N-  THR  232      34.403   3.619  20.907  1.00 47.26
ATOM   242  CA  THR  232      35.312   3.973  19.824  1.00 43.64
ATOM   243  CB  THR  232      35.379   5.502  19.629  1.00 41.93
ATOM   244  OG1 THR  232      35.945   6.117  20.797  1.00 39.10
ATOM   245  CG2 THR  232      33.985   6.065  19.382  1.00 29.80
ATOM   246  C   THR  232      36.720   3.458  20.046  1.00 43.97
ATOM   247  O   THR  232      37.629   3.791  19.292  1.00 40.55
ATOM   248  N   ASN  233      36.905   2.648  21.081  1.00 48.62
ATOM   249  CA  ASN  233      38.218   2.101  21.368  1.00 58.62
ATOM   250  CB  ASN  233      38.473   2.092  22.876  1.00 62.44
ATOM   251  CG  ASN  233      39.909   1.765  23.223  1.00 68.35
ATOM   252  OD1 ASN  233      40.843   2.401  22.724  1.00 65.50
ATOM   253  ND2 ASN  233      40.098   0.776  24.090  1.00 74.29
ATOM   254  C   ASN  233      38.282   0.690  20.802  1.00 65.06
ATOM   255  O   ASN  233      37.748  -0.257  21.382  1.00 69.47
ATOM   256  N   ALA  234      38.934   0.577  19.645  1.00 68.80
ATOM   257  CA  ALA  234      39.098  -0.672  18.909  1.00 70.98
ATOM   258  CB  ALA  234      40.215  -0.508  17.886  1.00 71.43
ATOM   259  C   ALA  234      39.353  -1.919  19.753  1.00 73.83
ATOM   260  O   ALA  234      40.193  -1.911  20.652  1.00 74.33
ATOM   261  N   GLN  235      38.615  -2.983  19.434  1.00 75.07
ATOM   262  CA  GLN  235      38.720  -4.281  20.103  1.00 76.32
ATOM   263  CB  GLN  235      40.130  -4.856  19.912  1.00 76.98
ATOM   264  CG  GLN  235      40.429  -5.417  18.516  1.00 77.07
ATOM   265  CD  GLN  235      40.142  -4.444  17.377  1.00 80.85
ATOM   266  OE1 GLN  235      38.985  -4.144  17.072  1.00 82.01
ATOM   267  NE2 GLN  235      41.201  -3.949  16.742  1.00 78.80
ATOM   268  C   GLN  235      38.351  -4.293  21.586  1.00 77.15
ATOM   269  O   GLN  235      38.217  -5.361  22.190  1.00 76.06
ATOM   270  N   GLY  236      38.188  -3.103  22.161  1.00 77.46
ATOM   271  CA  GLY  236      37.818  -2.974  23.562  1.00 78.37
ATOM   272  C   GLY  236      38.620  -3.783  24.566  1.00 79.43
ATOM   273  O   GLY  236      39.826  -3.575  24.736  1.00 79.47
ATOM   274  N   SER  237      37.937  -4.711  25.234  1.00 77.98
ATOM   275  CA  SER  237      38.544  -5.561  26.253  1.00 76.49
ATOM   276  CB  SER  237      37.475  -6.462  26.874  1.00 76.46
ATOM   277  C   SER  237      39.712  -6.412  25.765  1.00 75.35
ATOM   278  O   SER  237      40.858  -6.181  26.152  1.00 75.47
ATOM   279  N   HIS  238      39.421  -7.397  24.922  1.00 75.56
ATOM   280  CA  HIS  238      40.451  -8.294  24.409  1.00 75.46
ATOM   281  CB  HIS  238      39.837  -9.654  24.076  1.00 75.85
```

```
ATOM    282  C   HIS   238      41.185  -7.751  23.191  1.00 74.10
ATOM    283  O   HIS   238      40.610  -7.638  22.109  1.00 75.34
ATOM    284  N   TRP   239      42.459  -7.417  23.381  1.00 73.39
ATOM    285  CA  TRP   239      43.300  -6.907  22.302  1.00 74.02
ATOM    286  CB  TRP   239      43.556  -5.402  22.460  1.00 81.77
ATOM    287  CG  TRP   239      44.190  -5.023  23.761  1.00 89.67
ATOM    288  CD2 TRP   239      45.597  -4.797  24.008  1.00 93.19
ATOM    289  CE2 TRP   239      45.744  -4.527  25.384  1.00 95.46
ATOM    290  CE3 TRP   239      46.732  -4.793  23.186  1.00 95.35
ATOM    291  CD1 TRP   239      43.566  -4.888  24.972  1.00 94.16
ATOM    292  NE1 TRP   239      44.483  -4.591  25.954  1.00 97.48
ATOM    293  CZ2 TRP   239      46.993  -4.262  25.981  1.00 96.23
ATOM    294  CZ3 TRP   239      47.992  -4.528  23.778  1.00 96.75
ATOM    295  CH2 TRP   239      48.101  -4.262  25.164  1.00 97.32
ATOM    296  C   TRP   239      44.633  -7.649  22.283  1.00 70.77
ATOM    297  O   TRP   239      45.339  -7.644  21.274  1.00 71.70
ATOM    298  N   LYS   240      44.978  -8.276  23.405  1.00 67.10
ATOM    299  CA  LYS   240      46.219  -9.040  23.519  1.00 65.63
ATOM    300  CB  LYS   240      46.387  -9.569  24.946  1.00 66.65
ATOM    301  CG  LYS   240      46.379  -8.504  26.030  1.00 69.83
ATOM    302  CD  LYS   240      47.664  -7.691  26.069  1.00 71.49
ATOM    303  CE  LYS   240      48.839  -8.515  26.573  1.00 71.31
ATOM    304  NZ  LYS   240      50.071  -7.684  26.691  1.00 72.23
ATOM    305  C   LYS   240      46.143 -10.222  22.555  1.00 66.19
ATOM    306  O   LYS   240      47.075 -10.493  21.797  1.00 65.20
ATOM    307  N   ASN   241      45.010 -10.923  22.598  1.00 66.69
ATOM    308  CA  ASN   241      44.773 -12.089  21.750  1.00 67.53
ATOM    309  CB  ASN   241      43.503 -12.813  22.213  1.00 67.98
ATOM    310  CG  ASN   241      43.504 -13.096  23.704  1.00 70.19
ATOM    311  OD1 ASN   241      44.410 -13.744  24.227  1.00 71.37
ATOM    312  ND2 ASN   241      42.483 -12.605  24.400  1.00 71.48
ATOM    313  C   ASN   241      44.621 -11.681  20.286  1.00 66.62
ATOM    314  O   ASN   241      44.882 -12.475  19.382  1.00 64.76
ATOM    315  N   LYS   242      44.196 -10.436  20.070  1.00 66.86
ATOM    316  CA  LYS   242      43.989  -9.882  18.732  1.00 67.46
ATOM    317  CB  LYS   242      42.982  -8.731  18.799  1.00 67.93
ATOM    318  CG  LYS   242      41.601  -9.138  19.279  1.00 71.52
ATOM    319  CD  LYS   242      40.876  -9.986  18.246  1.00 74.32
ATOM    320  CE  LYS   242      40.449  -9.160  17.043  1.00 74.41
ATOM    321  NZ  LYS   242      39.455  -8.120  17.436  1.00 74.44
ATOM    322  C   LYS   242      45.281  -9.367  18.097  1.00 66.28
ATOM    323  O   LYS   242      45.414  -9.334  16.874  1.00 67.61
ATOM    324  N   ARG   243      46.225  -8.961  18.938  1.00 64.19
ATOM    325  CA  ARG   243      47.497  -8.422  18.478  1.00 62.43
ATOM    326  CB  ARG   243      48.376  -8.070  19.685  1.00 60.12
ATOM    327  C   ARG   243      48.261  -9.348  17.538  1.00 62.97
```

ATOM 328 O ARG 243 48.585 -10.484 17.891 1.00 63.96
ATOM 329 N LYS 244 48.531 -8.853 16.334 1.00 62.41
ATOM 330 CA LYS 244 49.303 -9.593 15.339 1.00 61.57
ATOM 331 CB LYS 244 48.601 -9.607 13.972 1.00 63.68
ATOM 332 CG LYS 244 47.210 -10.231 13.970 1.00 71.29
ATOM 333 CD LYS 244 46.666 -10.441 12.549 1.00 73.83
ATOM 334 CE LYS 244 46.505 -9.139 11.767 1.00 74.71
ATOM 335 NZ LYS 244 45.542 -8.199 12.407 1.00 73.32
ATOM 336 C LYS 244 50.613 -8.824 15.223 1.00 59.30
ATOM 337 O LYS 244 50.637 -7.716 14.686 1.00 56.34
ATOM 338 N PHE 245 51.690 -9.405 15.744 1.00 57.06
ATOM 339 CA PHE 245 52.996 -8.757 15.704 1.00 59.01
ATOM 340 CB PHE 245 54.034 -9.588 16.467 1.00 59.62
ATOM 341 CG PHE 245 53.704 -9.783 17.934 1.00 66.60
ATOM 342 CD1 PHE 245 52.656 -10.626 18.329 1.00 67.17
ATOM 343 CD2 PHE 245 54.427 -9.096 18.918 1.00 69.25
ATOM 344 CE1 PHE 245 52.320 -10.789 19.699 1.00 69.92
ATOM 345 CE2 PHE 245 54.111 -9.240 20.294 1.00 70.50
ATOM 346 CZ PHE 245 53.051 -10.091 20.686 1.00 70.89
ATOM 347 C PHE 245 53.463 -8.537 14.272 1.00 60.68
ATOM 348 O PHE 245 53.433 -9.455 13.447 1.00 62.37
ATOM 349 N LEU 246 53.880 -7.311 13.976 1.00 60.10
ATOM 350 CA LEU 246 54.359 -6.968 12.642 1.00 59.44
ATOM 351 CB LEU 246 54.654 -5.464 12.560 1.00 57.43
ATOM 352 CG LEU 246 54.937 -4.851 11.183 1.00 54.41
ATOM 353 CD1 LEU 246 53.681 -4.931 10.320 1.00 52.43
ATOM 354 CD2 LEU 246 55.358 -3.398 11.343 1.00 51.69
ATOM 355 C LEU 246 55.638 -7.772 12.425 1.00 62.05
ATOM 356 O LEU 246 56.447 -7.923 13.346 1.00 59.85
ATOM 357 N PRO 247 55.836 -8.312 11.203 1.00 63.33
ATOM 358 CD PRO 247 54.990 -8.230 10.001 1.00 64.44
ATOM 359 CA PRO 247 57.036 -9.102 10.910 1.00 63.56
ATOM 360 CB PRO 247 56.917 -9.327 9.404 1.00 64.42
ATOM 361 CG PRO 247 55.413 -9.481 9.251 1.00 64.90
ATOM 362 C PRO 247 58.342 -8.431 11.325 1.00 61.94
ATOM 363 O PRO 247 58.581 -7.256 11.053 1.00 61.60
ATOM 364 N ALA 248 59.180 -9.219 11.990 1.00 61.33
ATOM 365 CA ALA 248 60.468 -8.785 12.511 1.00 63.50
ATOM 366 CB ALA 248 61.151 -9.991 13.174 1.00 66.94
ATOM 370 C ALA 248 61.412 -8.140 11.489 1.00 64.19
ATOM 371 O ALA 248 62.449 -7.593 11.867 1.00 65.56
ATOM 372 N ASP 249 61.055 -8.188 10.207 1.00 64.36
ATOM 373 CA ASP 249 61.900 -7.610 9.163 1.00 63.33
ATOM 374 CB ASP 249 62.104 -8.618 8.026 1.00 62.97
ATOM 375 CG ASP 249 60.798 -9.051 7.395 1.00 64.63
ATOM 376 OD1 ASP 249 60.037 -9.803 8.043 1.00 64.84

```
ATOM   377  OD2 ASP  249      60.526  -8.626   6.253  1.00 66.52
ATOM   378  C   ASP  249      61.388  -6.293   8.572  1.00 64.31
ATOM   379  O   ASP  249      62.112  -5.624   7.830  1.00 64.73
ATOM   380  N   ILE  250      60.148  -5.927   8.885  1.00 63.09
ATOM   381  CA  ILE  250      59.577  -4.676   8.385  1.00 64.39
ATOM   382  CB  ILE  250      58.035  -4.741   8.349  1.00 65.79
ATOM   383  CG2 ILE  250      57.463  -3.408   7.861  1.00 64.78
ATOM   384  CG1 ILE  250      57.594  -5.893   7.439  1.00 65.28
ATOM   385  CD1 ILE  250      56.094  -6.103   7.362  1.00 65.08
ATOM   386  C   ILE  250      60.015  -3.534   9.299  1.00 65.21
ATOM   387  O   ILE  250      60.002  -3.676  10.524  1.00 64.05
ATOM   388  N   GLY  251      60.401  -2.405   8.700  1.00 65.48
ATOM   389  CA  GLY  251      60.864  -1.263   9.472  1.00 67.32
ATOM   390  C   GLY  251      62.069  -1.711  10.271  1.00 68.52
ATOM   391  O   GLY  251      62.099  -1.610  11.497  1.00 65.49
ATOM   392  N   GLN  252      63.080  -2.194   9.555  1.00 72.26
ATOM   393  CA  GLN  252      64.277  -2.726  10.176  1.00 74.10
ATOM   394  CB  GLN  252      64.598  -4.068   9.515  1.00 75.82
ATOM   395  CG  GLN  252      65.518  -4.974  10.302  1.00 77.81
ATOM   396  CD  GLN  252      65.686  -6.319   9.630  1.00 79.38
ATOM   397  OE1 GLN  252      66.087  -6.397   8.468  1.00 80.55
ATOM   398  NE2 GLN  252      65.384  -7.391  10.357  1.00 78.12
ATOM   399  C   GLN  252      65.496  -1.817  10.138  1.00 77.17
ATOM   400  O   GLN  252      65.553  -0.826   9.399  1.00 76.50
ATOM   401  N   ALA  253      66.470  -2.187  10.966  1.00 80.78
ATOM   402  CA  ALA  253      67.729  -1.475  11.104  1.00 83.70
ATOM   403  CB  ALA  253      68.402  -1.903  12.401  1.00 83.23
ATOM   404  C   ALA  253      68.639  -1.774   9.913  1.00 85.59
ATOM   405  O   ALA  253      68.294  -2.673   9.117  1.00 85.69
ATOM   406  OXT ALA  253      69.694  -1.115   9.802  1.00 88.37
ATOM   429  CB  LYS  263      65.708   7.766   4.514  1.00 63.50
ATOM   430  C   LYS  263      64.141   6.903   6.272  1.00 63.41
ATOM   431  O   LYS  263      64.442   5.776   6.673  1.00 61.93
ATOM   432  N   LYS  263      66.368   7.841   6.894  1.00 61.71
ATOM   433  CA  LYS  263      65.218   7.942   5.950  1.00 64.36
ATOM   434  N   VAL  264      62.886   7.305   6.090  1.00 61.15
ATOM   435  CA  VAL  264      61.724   6.462   6.351  1.00 59.46
ATOM   436  CB  VAL  264      60.429   7.221   5.962  1.00 59.03
ATOM   437  CG1 VAL  264      59.200   6.421   6.363  1.00 53.79
ATOM   438  CG2 VAL  264      60.422   8.593   6.623  1.00 55.32
ATOM   439  C   VAL  264      61.790   5.129   5.595  1.00 60.96
ATOM   440  O   VAL  264      62.071   5.098   4.395  1.00 62.13
ATOM   441  N   ASP  265      61.522   4.034   6.304  1.00 62.59
ATOM   442  CA  ASP  265      61.562   2.693   5.727  1.00 64.95
ATOM   443  CB  ASP  265      61.322   1.644   6.810  1.00 64.32
ATOM   444  CG  ASP  265      61.415   0.232   6.277  1.00 67.70
```

ATOM 445 OD1 ASP 265 62.514 -0.158 5.831 1.00 72.59
ATOM 446 OD2 ASP 265 60.393 -0.486 6.289 1.00 68.84
ATOM 447 C ASP 265 60.560 2.470 4.591 1.00 65.64
ATOM 448 O ASP 265 60.789 1.637 3.717 1.00 68.81
ATOM 449 N LEU 266 59.456 3.211 4.624 1.00 65.12
ATOM 450 CA LEU 266 58.394 3.138 3.615 1.00 63.40
ATOM 451 CB LEU 266 58.963 3.333 2.202 1.00 67.34
ATOM 452 CG LEU 266 59.665 4.662 1.894 1.00 69.35
ATOM 453 CD1 LEU 266 60.193 4.627 0.469 1.00 68.24
ATOM 454 CD2 LEU 266 58.705 5.831 2.075 1.00 70.47
ATOM 455 C LEU 266 57.562 1.854 3.658 1.00 59.67
ATOM 456 O LEU 266 56.342 1.903 3.486 1.00 53.35
ATOM 457 N GLU 267 58.205 0.713 3.872 1.00 58.01
ATOM 458 CA GLU 267 57.454 -0.535 3.945 1.00 58.34
ATOM 459 CB GLU 267 58.387 -1.750 3.921 1.00 59.21
ATOM 460 CG GLU 267 57.640 -3.072 4.053 1.00 62.89
ATOM 461 CD GLU 267 58.548 -4.285 3.979 1.00 67.66
ATOM 462 OE1 GLU 267 59.513 -4.371 4.771 1.00 69.95
ATOM 463 OE2 GLU 267 58.285 -5.162 3.129 1.00 69.40
ATOM 464 C GLU 267 56.666 -0.515 5.243 1.00 57.67
ATOM 465 O GLU 267 55.488 -0.877 5.276 1.00 58.34
ATOM 466 N ALA 268 57.327 -0.077 6.317 1.00 53.43
ATOM 467 CA ALA 268 56.701 0.013 7.629 1.00 49.00
ATOM 468 CB ALA 268 57.766 0.244 8.695 1.00 45.72
ATOM 469 C ALA 268 55.701 1.166 7.611 1.00 45.76
ATOM 470 O ALA 268 54.598 1.057 8.144 1.00 41.50
ATOM 471 N PHE 269 56.106 2.267 6.983 1.00 41.43
ATOM 472 CA PHE 269 55.277 3.457 6.855 1.00 43.96
ATOM 473 CB PHE 269 56.016 4.511 6.022 1.00 40.10
ATOM 474 CG PHE 269 55.264 5.818 5.859 1.00 40.44
ATOM 475 CD1 PHE 269 55.102 6.690 6.949 1.00 38.98
ATOM 476 CD2 PHE 269 54.706 6.170 4.626 1.00 37.15
ATOM 477 CE1 PHE 269 54.401 7.920 6.807 1.00 32.12
ATOM 478 CE2 PHE 269 53.999 7.389 4.457 1.00 38.41
ATOM 479 CZ PHE 269 53.843 8.269 5.554 1.00 40.55
ATOM 480 C PHE 269 53.976 3.081 6.151 1.00 49.76
ATOM 481 O PHE 269 52.903 3.622 6.443 1.00 52.15
ATOM 482 N SER 270 54.089 2.140 5.217 1.00 53.15
ATOM 483 CA SER 270 52.957 1.669 4.432 1.00 52.29
ATOM 484 CB SER 270 53.456 0.703 3.349 1.00 51.85
ATOM 485 OG SER 270 52.400 0.297 2.499 1.00 53.42
ATOM 486 C SER 270 51.901 0.992 5.303 1.00 49.38
ATOM 487 O SER 270 50.713 1.284 5.185 1.00 48.74
ATOM 488 N HIS 271 52.335 0.085 6.173 1.00 50.15
ATOM 489 CA HIS 271 51.410 -0.614 7.061 1.00 51.67
ATOM 490 CB HIS 271 52.150 -1.682 7.878 1.00 58.52

ATOM 491 CG HIS 271 52.697 -2.808 7.059 1.00 68.97
ATOM 492 CD2 HIS 271 52.425 -4.131 7.063 1.00 70.88
ATOM 493 ND1 HIS 271 53.660 -2.621 6.080 1.00 71.98
ATOM 494 CE1 HIS 271 53.951 -3.782 5.528 1.00 73.91
ATOM 495 NE2 HIS 271 53.214 -4.720 6.104 1.00 73.59
ATOM 496 C HIS 271 50.711 0.365 8.008 1.00 48.33
ATOM 497 O HIS 271 49.507 0.260 8.240 1.00 48.39
ATOM 498 N PHE 272 51.472 1.321 8.537 1.00 41.34
ATOM 499 CA PHE 272 50.946 2.316 9.462 1.00 39.44
ATOM 500 CB PHE 272 52.076 3.215 9.976 1.00 36.67
ATOM 501 CG PHE 272 53.167 2.475 10.749 1.00 33.39
ATOM 502 CD1 PHE 272 54.421 3.065 10.915 1.00 33.14
ATOM 503 CD2 PHE 272 52.934 1.216 11.311 1.00 38.28
ATOM 504 CE1 PHE 272 55.454 2.418 11.633 1.00 38.26
ATOM 505 CE2 PHE 272 53.961 0.538 12.047 1.00 43.28
ATOM 506 CZ PHE 272 55.225 1.146 12.207 1.00 39.74
ATOM 507 C PHE 272 49.857 3.183 8.822 1.00 40.75
ATOM 508 O PHE 272 48.784 3.361 9.394 1.00 35.51
ATOM 509 N THR 273 50.136 3.714 7.635 1.00 41.64
ATOM 510 CA THR 273 49.170 4.561 6.938 1.00 45.97
ATOM 511 CB THR 273 49.813 5.249 5.711 1.00 51.52
ATOM 512 OG1 THR 273 50.339 4.257 4.815 1.00 45.74
ATOM 513 CG2 THR 273 50.936 6.179 6.158 1.00 49.73
ATOM 514 C THR 273 47.941 3.772 6.481 1.00 46.23
ATOM 515 O THR 273 46.879 4.344 6.233 1.00 41.21
ATOM 516 N LYS 274 48.090 2.455 6.380 1.00 46.21
ATOM 517 CA LYS 274 46.984 1.608 5.955 1.00 54.53
ATOM 518 CB LYS 274 47.482 0.180 5.708 1.00 54.36
ATOM 519 C LYS 274 45.878 1.595 7.006 1.00 56.88
ATOM 520 O LYS 274 44.695 1.486 6.675 1.00 57.98
ATOM 521 N ILE 275 46.267 1.718 8.268 1.00 56.48
ATOM 522 CA ILE 275 45.312 1.695 9.368 1.00 52.64
ATOM 523 CB ILE 275 45.710 0.611 10.391 1.00 49.15
ATOM 524 CG2 ILE 275 45.719 -0.758 9.701 1.00 47.42
ATOM 525 CG1 ILE 275 47.101 0.921 10:971 1.00 45.31
ATOM 526 CD1 ILE 275 47.565 -0.050 12.053 1.00 37.22
ATOM 527 C ILE 275 45.175 3.032 10.086 1.00 51.78
ATOM 528 O ILE 275 44.578 3.108 11.159 1.00 49.80
ATOM 529 N ILE 276 45.710 4.088 9.481 1.00 51.76
ATOM 530 CA ILE 276 45.657 5.416 10.084 1.00 52.58
ATOM 531 CB ILE 276 46.733 6.364 9.464 1.00 55.04
ATOM 532 CG2 ILE 276 46.395 6.696 8.020 1.00 53.28
ATOM 533 CG1 ILE 276 46.823 7.663 10.270 1.00 57.31
ATOM 534 CD1 ILE 276 47.364 7.485 11.664 1.00 60.32
ATOM 535 C ILE 276 44.279 6.073 9.974 1.00 50.70
ATOM 536 O ILE 276 43.858 6.775 10.895 1.00 55.55

ATOM 537 N THR 277 43.576 5.849 8.866 1.00 47.33
ATOM 538 CA THR 277 42.255 6.450 8.681 1.00 42.59
ATOM 539 CB THR 277 41.695 6.190 7.254 1.00 44.97
ATOM 540 OG1 THR 277 42.611 6.702 6.280 1.00 46.38
ATOM 541 CG2 THR 277 40.349 6.892 7.065 1.00 37.17
ATOM 542 C- THR 277 41.252 5.954 9.718 1.00 39.84
ATOM 543 O THR 277 40.570 6.759 10.351 1.00 40.55
ATOM 544 N PRO 278 41.126 4.620 9.899 1.00 38.20
ATOM 545 CD PRO 278 41.746 3.457 9.242 1.00 36.34
ATOM 546 CA PRO 278 40.165 4.167 10.907 1.00 36.63
ATOM 547 CB PRO 278 40.242 2.639 10.783 1.00 32.95
ATOM 548 CG PRO 278 41.668 2.419 10.343 1.00 35.75
ATOM 549 C PRO 278 40.532 4.681 12.306 1.00 38.60
ATOM 550 O PRO 278 39.653 5.017 13.104 1.00 37.67
ATOM 551 N ALA 279 41.831 4.758 12.586 1.00 37.05
ATOM 552 CA ALA 279 42.315 5.248 13.877 1.00 33.18
ATOM 553 CB ALA 279 43.836 5.135 13.949 1.00 30.56
ATOM 554 C ALA 279 41.890 6.692 14.077 1.00 33.47
ATOM 555 O ALA 279 41.403 7.060 15.151 1.00 33.74
ATOM 556 N ILE 280 42.067 7.517 13.041 1.00 29.96
ATOM 557 CA ILE 280 41.687 8.921 13.121 1.00 25.94
ATOM 558 CB ILE 280 42.155 9.716 11.871 1.00 26.95
ATOM 559 CG2 ILE 280 41.643 11.168 11.923 1.00 15.40
ATOM 560 CG1 ILE 280 43.686 9.702 11.798 1.00 26.73
ATOM 561 CD1 ILE 280 44.255 10.378 10.550 1.00 34.31
ATOM 562 C ILE 280 40.181 9.074 13.251 1.00 31.39
ATOM 563 O ILE 280 39.696 9.943 13.973 1.00 35.69
ATOM 564 N THR 281 39.428 8.226 12.552 1.00 30.90
ATOM 565 CA THR 281 37.982 8.318 12.592 1.00 33.49
ATOM 566 CB THR 281 37.321 7.451 11.478 1.00 37.18
ATOM 567 OG1 THR 281 37.760 6.091 11.592 1.00 46.48
ATOM 568 CG2 THR 281 37.703 7.972 10.114 1.00 32.85
ATOM 569 C THR 281 37.435 7.926 13.968 1.00 29.94
ATOM 570 O THR 281 36.428 8.473 14.408 1.00 25.55
ATOM 571 N ARG 282 38.103 6.997 14.641 1.00 32.70
ATOM 572 CA ARG 282 37.676 6.585 15.975 1.00 34.27
ATOM 573 CB ARG 282 38.511 5.411 16.479 1.00 33.78
ATOM 574 CG ARG 282 38.259 4.111 15.743 1.00 45.15
ATOM 575 CD ARG 282 39.017 2.976 16.404 1.00 58.24
ATOM 576 NE ARG 282 38.763 1.679 15.776 1.00 68.41
ATOM 577 CZ ARG 282 39.141 1.344 14.546 1.00 72.31
ATOM 578 NH1 ARG 282 39.802 2.213 13.791 1.00 77.89
ATOM 579 NH2 ARG 282 38.864 0.139 14.066 1.00 69.25
ATOM 580 C ARG 282 37.789 7.764 16.942 1.00 34.81
ATOM 581 O ARG 282 37.006 7.886 17.884 1.00 36.03
ATOM 582 N VAL 283 38.761 8.640 16.696 1.00 31.71

ATOM 583 CA VAL 283 38.952 9.815 17.532 1.00 30.16
ATOM 584 CB VAL 283 40.298 10.524 17.224 1.00 29.00
ATOM 585 CG1 VAL 283 40.448 11.777 18.076 1.00 28.64
ATOM 586 CG2 VAL 283 41.448 9.577 17.487 1.00 28.28
ATOM 587 C VAL 283 37.801 10.787 17.292 1.00 32.50
ATOM 588 O VAL 283 37.284 11.388 18.236 1.00 33.48
ATOM 589 N VAL 284 37.403 10.945 16.028 1.00 30.96
ATOM 590 CA VAL 284 36.293 11.838 15.694 1.00 29.14
ATOM 591 CB VAL 284 36.138 12.023 14.158 1.00 31.27
ATOM 592 CG1 VAL 284 34.990 12.985 13.868 1.00 24.21
ATOM 593 CG2 VAL 284 37.450 12.565 13.554 1.00 30.51
ATOM 594 C VAL 284 34.995 11.260 16.258 1.00 28.89
ATOM 595 O VAL 284 34.146 12.005 16.743 1.00 27.29
ATOM 596 N ASP 285 34.845 9.937 16.208 1.00 28.76
ATOM 597 CA ASP 285 33.639 9.307 16.738 1.00 35.32
ATOM 598 CB ASP 285 33.627 7.792 16.459 1.00 33.29
ATOM 599 CG ASP 285 33.523 7.471 14.971 1.00 38.15
ATOM 600 OD1 ASP 285 32.729 8.139 14.276 1.00 34.70
ATOM 601 OD2 ASP 285 34.209 6.532 14.504 1.00 34.43
ATOM 602 C ASP 285 33.531 9.553 18.248 1.00 36.70
ATOM 603 O ASP 285 32.431 9.685 18.786 1.00 37.96
ATOM 604 N PHE 286 34.679 9.624 18.916 1.00 35.96
ATOM 605 CA PHE 286 34.736 9.869 20.349 1.00 37.10
ATOM 606 CB PHE 286 36.187 9.777 20.845 1.00 37.97
ATOM 607 CG PHE 286 36.377 10.219 22.283 1.00 36.50
ATOM 608 CD1 PHE 286 35.815 9.490 23.340 1.00 36.75
ATOM 609 CD2 PHE 286 37.100 11.381 22.575 1.00 33.83
ATOM 610 CE1 PHE 286 35.966 9.917 24.685 1.00 39.55
ATOM 611 CE2 PHE 286 37.265 11.831 23.911 1.00 38.08
ATOM 612 CZ PHE 286 36.696 11.092 24.972 1.00 34.44
ATOM 613 C PHE 286 34.179 11.249 20.665 1.00 36.83
ATOM 614 O PHE 286 33.292 11.401 21.518 1.00 35.61
ATOM 615 N ALA 287 34.696 12.255 19.968 1.00 37.33
ATOM 616 CA ALA 287 34.266 13.631 20.171 1.00 36.34
ATOM 617 CB ALA 287 35.118 14.565 19.325 1.00 36.40
ATOM 618 C ALA 287 32.785 13.840 19.861 1.00 38.76
ATOM 619 O ALA 287 32.121 14.641 20.525 1.00 41.98
ATOM 620 N LYS 288 32.267 13.130 18.862 1.00 38.28
ATOM 621 CA LYS 288 30.856 13.268 18.499 1.00 45.26
ATOM 622 CB LYS 288 30.541 12.534 17.188 1.00 48.35
ATOM 623 CG LYS 288 31.159 13.158 15.951 1.00 51.43
ATOM 624 CD LYS 288 30.556 12.589 14.665 1.00 60.23
ATOM 625 CE LYS 288 30.848 11.107 14.479 1.00 62.81
ATOM 626 NZ LYS 288 32.312 10.852 14.392 1.00 64.69
ATOM 627 C LYS 288 29.913 12.763 19.586 1.00 43.31
ATOM 628 O LYS 288 28.791 13.253 19.707 1.00 45.66

ATOM 629 N LYS 289 30.367 11.789 20.371 1.00 41.70
ATOM 630 CA LYS 289 29.548 11.235 21.443 1.00 40.67
ATOM 631 CB LYS 289 29.984 9.806 21.767 1.00 42.25
ATOM 632 CG LYS 289 29.912 8.853 20.591 1.00 39.53
ATOM 633 CD LYS 289 30.341 7.456 21.003 1.00 43.19
ATOM 634 CE LYS 289 30.454 6.539 19.807 1.00 45.74
ATOM 635 NZ LYS 289 29.175 6.457 19.049 1.00 52.49
ATOM 636 C LYS 289 29.585 12.076 22.721 1.00 41.50
ATOM 637 O LYS 289 29.030 11.676 23.742 1.00 39.77
ATOM 638 N LEU 290 30.242 13.235 22.661 1.00 40.68
ATOM 639 CA LEU 290 30.307 14.143 23.811 1.00 39.33
ATOM 640 CB LEU 290 31.757 14.590 24.075 1.00 36.14
ATOM 641 CG LEU 290 32.815 13.526 24.401 1.00 34.81
ATOM 642 CD1 LEU 290 34.155 14.200 24.558 1.00 29.07
ATOM 643 CD2 LEU 290 32.445 12.764 25.667 1.00 33.45
ATOM 644 C LEU 290 29.448 15.368 23.481 1.00 40.08
ATOM 645 O LEU 290 29.828 16.196 22.655 1.00 42.00
ATOM 646 N PRO 291 28.279 15.500 24.137 1.00 40.27
ATOM 647 CD PRO 291 27.716 14.625 25.185 1.00 39.65
ATOM 648 CA PRO 291 27.372 16.628 23.899 1.00 38.28
ATOM 649 CB PRO 291 26.327 16.447 24.997 1.00 35.88
ATOM 650 CG PRO 291 26.230 14.932 25.071 1.00 34.19
ATOM 651 C PRO 291 28.010 18.006 23.910 1.00 40.05
ATOM 652 O PRO 291 27.663 18.857 23.089 1.00 41.33
ATOM 653 N MET 292 28.933 18.235 24.837 1.00 40.59
ATOM 654 CA MET 292 29.607 19.529 24.932 1.00 42.86
ATOM 655 CB MET 292 30.635 19.521 26.059 1.00 43.28
ATOM 656 CG MET 292 30.050 19.286 27.428 1.00 50.35
ATOM 657 SD MET 292 31.329 19.157 28.679 1.00 51.17
ATOM 658 CE MET 292 30.331 18.787 30.111 1.00 54.63
ATOM 659 C MET 292 30.311 19.869 23.629 1.00 41.05
ATOM 660 O MET 292 30.341 21.024 23.210 1.00 39.66
ATOM 661 N PHE 293 30.882 18.854 22.992 1.00 39.30
ATOM 662 CA PHE 293 31.594 19.057 21.747 1.00 40.92
ATOM 663 CB PHE 293 32.300 17.772 21.335 1.00 40.98
ATOM 664 CG PHE 293 33.117 17.902 20.070 1.00 42.78
ATOM 665 CD1 PHE 293 34.272 18.692 20.046 1.00 44.40
ATOM 666 CD2 PHE 293 32.727 17.235 18.902 1.00 43.66
ATOM 667 CE1 PHE 293 35.051 18.823 18.865 1.00 39.83
ATOM 668 CE2 PHE 293 33.483 17.348 17.710 1.00 46.21
ATOM 669 CZ PHE 293 34.654 18.147 17.693 1.00 45.18
ATOM 670 C PHE 293 30.653 19.492 20.624 1.00 45.54
ATOM 671 O PHE 293 30.985 20.377 19.829 1.00 42.01
ATOM 672 N CYS 294 29.468 18.895 20.579 1.00 47.05
ATOM 673 CA CYS 294 28.545 19.200 19.512 1.00 50.15
ATOM 674 CB CYS 294 27.320 18.329 19.584 1.00 45.90

ATOM 675 SG CYS 294 27.680 16.529 19.352 1.00 51.50
ATOM 676 C CYS 294 28.062 20.636 19.582 1.00 51.38
ATOM 677 O CYS 294 27.682 21.199 18.543 1.00 53.83
ATOM 678 N GLU 295 27.996 21.170 20.802 1.00 49.72
ATOM 679 CA GLU 295 27.541 22.535 21.067 1.00 52.53
ATOM 680 CB GLU 295 27.384 22.762 22.575 1.00 57.40
ATOM 681 CG GLU 295 26.179 22.090 23.208 1.00 69.63
ATOM 682 CD GLU 295 24.871 22.731 22.785 1.00 78.49
ATOM 683 OE1 GLU 295 24.698 23.942 23.041 1.00 82.82
ATOM 684 OE2 GLU 295 24.017 22.029 22.199 1.00 85.30
ATOM 685 C GLU 295 28.484 23.589 20.515 1.00 48.54
ATOM 686 O GLU 295 28.170 24.777 20.537 1.00 49.82
ATOM 687 N LEU 296 29.637 23.149 20.030 1.00 43.79
ATOM 688 CA LEU 296 30.629 24.066 19.476 1.00 45.42
ATOM 689 CB LEU 296 32.040 23.541 19.771 1.00 41.04
ATOM 690 CG LEU 296 32.416 23.394 21.252 1.00 42.74
ATOM 691 CD1 LEU 296 33.789 22.753 21.352 1.00 40.99
ATOM 692 CD2 LEU 296 32.406 24.755 21.945 1.00 39.44
ATOM 693 C LEU 296 30.448 24.239 17.968 1.00 45.56
ATOM 694 O LEU 296 29.966 23.333 17.278 1.00 43.07
ATOM 695 N PRO 297 30.823 25.414 17.436 1.00 46.99
ATOM 696 CD PRO 297 31.372 26.613 18.083 1.00 47.12
ATOM 697 CA PRO 297 30.689 25.650 15.998 1.00 49.61
ATOM 698 CB PRO 297 31.106 27.118 15.861 1.00 49.91
ATOM 699 CG PRO 297 30.757 27.693 17.230 1.00 51.28
ATOM 700 C PRO 297 31.600 24.717 15.202 1.00 49.59
ATOM 701 O PRO 297 32.727 24.446 15.615 1.00 51.66
ATOM 702 N CYS 298 31.093 24.227 14.075 1.00 51.02
ATOM 703 CA CYS 298 31.817 23.322 13.158 1.00 52.86
ATOM 704 CB CYS 298 31.100 23.260 11.804 1.00 54.57
ATOM 705 SG CYS 298 31.935 24.249 10.470 1.00 67.87
ATOM 706 C CYS 298 33.269 23.797 12.974 1.00 48.51
ATOM 707 O CYS 298 34.197 22.991 12.819 1.00 49.58
ATOM 708 N GLU 299 33.464 25.113 13.019 1.00 44.17
ATOM 709 CA GLU 299 34.797 25.692 12.890 1.00 47.57
ATOM 710 CB GLU 299 34.741 27.227 12.912 1.00 49.92
ATOM 711 CG GLU 299 34.001 27.871 11.747 1.00 59.30
ATOM 712 CD GLU 299 32.489 27.763 11.848 1.00 63.80
ATOM 713 OE1 GLU 299 31.805 28.162 10.882 1.00 69.03
ATOM 714 OE2 GLU 299 31.979 27.297 12.889 1.00 67.10
ATOM 715 C GLU 299 35.698 25.213 14.031 1.00 46.57
ATOM 716 O GLU 299 36.772 24.659 13.787 1.00 44.65
ATOM 717 N ASP 300 35.263 25.432 15.274 1.00 45.17
ATOM 718 CA ASP 300 36.046 25.008 16.433 1.00 43.32
ATOM 719 CB ASP 300 35.442 25.517 17.747 1.00 37.38
ATOM 720 CG ASP 300 35.567 27.016 17.910 1.00 36.23

ATOM 721 OD1 ASP 300 36.486 27.613 17.313 1.00 35.87
ATOM 722 OD2 ASP 300 34.769 27.601 18.669 1.00 40.14
ATOM 723 C ASP 300 36.174 23.495 16.513 1.00 42.81
ATOM 724 O ASP 300 37.193 22.979 16.974 1.00 46.02
ATOM 725 N GLN 301 35.139 22.788 16.066 1.00 38.60
ATOM 726 CA GLN 301 35.151 21.334 16.086 1.00 40.00
ATOM 727 CB GLN 301 33.815 20.783 15.576 1.00 38.59
ATOM 728 CG GLN 301 32.608 21.334 16.317 1.00 40.26
ATOM 729 CD GLN 301 31.311 20.696 15.869 1.00 44.15
ATOM 730 OE1 GLN 301 31.074 20.527 14.673 1.00 45.73
ATOM 731 NE2 GLN 301 30.450 20.363 16.824 1.00 46.13
ATOM 732 C GLN 301 36.298 20.807 15.227 1.00 41.64
ATOM 733 O GLN 301 36.975 19.850 15.601 1.00 45.02
ATOM 734 N ILE 302 36.523 21.441 14.077 1.00 41.01
ATOM 735 CA ILE 302 37.607 21.029 13.189 1.00 40.23
ATOM 736 CB ILE 302 37.580 21.798 11.825 1.00 39.52
ATOM 737 CG2 ILE 302 38.724 21.308 10.931 1.00 31.98
ATOM 738 CG1 ILE 302 36.230 21.607 11.119 1.00 40.77
ATOM 739 CD1 ILE 302 35.895 20.166 10.733 1.00 45.43
ATOM 740 C ILE 302 38.948 21.322 13.869 1.00 38.58
ATOM 741 O ILE 302 39.811 20.452 13.938 1.00 40.81
ATOM 742 N ILE 303 39.110 22.547 14.364 1.00 37.50
ATOM 743 CA ILE 303 40.343 22.958 15.030 1.00 39.33
ATOM 744 CB ILE 303 40.263 24.442 15.501 1.00 39.06
ATOM 745 CG2 ILE 303 41.525 24.822 16.279 1.00 36.19
ATOM 746 CG1 ILE 303 40.103 25.358 14.280 1.00 40.15
ATOM 747 CD1 ILE 303 39.972 26.846 14.602 1.00 36.93
ATOM 748 C ILE 303 40.676 22.061 16.222 1.00 36.49
ATOM 749 O ILE 303 41.818 21.623 16.378 1.00 36.58
ATOM 750 N LEU 304 39.674 21.788 17.057 1.00 32.91
ATOM 751 CA LEU 304 39.851 20.940 18.234 1.00 27.55
ATOM 752 CB LEU 304 38.546 20.875 19.026 1.00 22.35
ATOM 753 CG LEU 304 38.472 21.629 20.361 1.00 26.88
ATOM 754 CD1 LEU 304 39.096 22.998 20.275 1.00 24.82
ATOM 755 CD2 LEU 304 37.024 21.728 20.787 1.00 23.69
ATOM 756 C LEU 304 40.313 19.534 17.855 1.00 28.05
ATOM 757 O LEU 304 41.277 19.013 18.429 1.00 24.68
ATOM 758 N LEU 305 39.637 18.929 16.882 1.00 26.34
ATOM 759 CA LEU 305 39.997 17.588 16.436 1.00 30.91
ATOM 760 CB LEU 305 38.937 17.055 15.466 1.00 32.50
ATOM 761 CG LEU 305 37.585 16.757 16.132 1.00 33.36
ATOM 762 CD1 LEU 305 36.557 16.439 15.079 1.00 33.87
ATOM 763 CD2 LEU 305 37.733 15.581 17.101 1.00 31.72
ATOM 764 C LEU 305 41.381 17.523 15.796 1.00 29.76
ATOM 765 O LEU 305 42.109 16.553 15.990 1.00 29.33
ATOM 766 N LYS 306 41.754 18.554 15.048 1.00 29.72

ATOM 767 CA LYS 306 43.065 18.569 14.409 1.00 34.28
ATOM 768 CB LYS 306 43.122 19.673 13.345 1.00 35.98
ATOM 769 CG LYS 306 42.140 19.465 12.206 1.00 43.35
ATOM 770 CD LYS 306 42.195 20.583 11.170 1.00 51.50
ATOM 771 CE LYS 306 43.532 20.639 10.446 1.00 53.26
ATOM 772 NZ LYS 306 43.522 21.702 9.409 1.00 59.61
ATOM 773 C LYS 306 44.183 18.777 15.434 1.00 35.25
ATOM 774 O LYS 306 45.312 18.332 15.231 1.00 33.95
ATOM 775 N GLY 307 43.853 19.446 16.536 1.00 35.79
ATOM 776 CA GLY 307 44.836 19.700 17.576 1.00 34.59
ATOM 777 C GLY 307 45.075 18.562 18.559 1.00 33.80
ATOM 778 O GLY 307 46.200 18.360 19.008 1.00 31.59
ATOM 779 N CYS 308 44.030 17.806 18.880 1.00 31.15
ATOM 780 CA CYS 308 44.153 16.712 19.839 1.00 29.04
ATOM 781 CB CYS 308 42.929 16.667 20.750 1.00 27.59
ATOM 782 SG CYS 308 41.452 15.974 19.941 1.00 30.50
ATOM 783 C CYS 308 44.289 15.339 19.208 1.00 30.59
ATOM 784 O CYS 308 44.609 14.374 19.899 1.00 33.77
ATOM 785 N CYS 309 44.053 15.247 17.907 1.00 28.46
ATOM 786 CA CYS 309 44.099 13.961 17.219 1.00 30.10
ATOM 787 CB CYS 309 43.983 14.161 15.706 1.00 33.43
ATOM 788 SG CYS 309 43.761 12.613 14.819 1.00 35.20
ATOM 789 C CYS 309 45.301 13.071 17.524 1.00 27.72
ATOM 790 O CYS 309 45.135 11.907 17.913 1.00 27.69
ATOM 791 N MET 310 46.508 13.594 17.339 1.00 26.15
ATOM 792 CA MET 310 47.700 12.798 17.605 1.00 26.06
ATOM 793 CB MET 310 48.928 13.439 16.951 1.00 25.32
ATOM 794 CG MET 310 50.207 12.648 17.132 1.00 24.08
ATOM 795 SD MET 310 50.101 10.991 16.423 1.00 27.71
ATOM 796 CE MET 310 51.674 10.307 16.934 1.00 28.50
ATOM 797 C MET 310 47.941 12.612 19.113 1.00 25.94
ATOM 798 O MET 310 48.592 11.653 19.526 1.00 28.09
ATOM 799 N GLU 311 47.405 13.522 19.923 1.00 25.39
ATOM 800 CA GLU 311 47.560 13.445 21.370 1.00 27.03
ATOM 801 CB GLU 311 47.099 14.748 22.030 1.00 24.39
ATOM 802 CG GLU 311 47.610 15.999 21.331 1.00 26.00
ATOM 803 CD GLU 311 47.292 17.271 22.084 1.00 23.95
ATOM 804 OE1 GLU 311 46.182 17.379 22.640 1.00 19.72
ATOM 805 OE2 GLU 311 48.150 18.181 22.088 1.00 26.51
ATOM 806 C GLU 311 46.727 12.272 21.902 1.00 27.51
ATOM 807 O GLU 311 47.152 11.552 22.807 1.00 29.67
ATOM 808 N ILE 312 45.547 12.086 21.326 1.00 26.82
ATOM 809 CA ILE 312 44.661 11.001 21.724 1.00 25.71
ATOM 810 CB ILE 312 43.194 11.296 21.304 1.00 23.35
ATOM 811 CG2 ILE 312 42.301 10.068 21.583 1.00 20.27
ATOM 812 CG1 ILE 312 42.690 12.534 22.062 1.00 20.88

ATOM 813 CD1 ILE 312 41.244 12.961 21.755 1.00 18.15
ATOM 814 C ILE 312 45.116 9.665 21.132 1.00 27.91
ATOM 815 O ILE 312 45.064 8.628 21.804 1.00 28.96
ATOM 816 N MET 313 45.582 9.683 19.886 1.00 27.66
ATOM 817 CA MET 313 46.045 8.447 19.257 1.00 30.18
ATOM 818 CB MET 313 46.386 8.662 17.771 1.00 36.89
ATOM 819 CG MET 313 45.186 8.938 16.861 1.00 37.95
ATOM 820 SD MET 313 45.624 8.943 15.096 1.00 42.38
ATOM 821 CE MET 313 46.724 10.319 14.999 1.00 40.68
ATOM 822 C MET 313 47.264 7.897 19.975 1.00 27.43
ATOM 823 O MET 313 47.351 6.690 20.219 1.00 28.61
ATOM 824 N SER 314 48.202 8.776 20.318 1.00 24.88
ATOM 825 CA SER 314 49.416 8.352 21.011 1.00 27.98
ATOM 826 CB SER 314 50.420 9.511 21.118 1.00 29.64
ATOM 827 OG SER 314 49.912 10.560 21.911 1.00 43.44
ATOM 828 C SER 314 49.082 7.818 22.402 1.00 22.30
ATOM 829 O SER 314 49.737 6.895 22.892 1.00 24.18
ATOM 830 N LEU 315 48.070 8.395 23.039 1.00 23.99
ATOM 831 CA LEU 315 47.646 7.918 24.365 1.00 25.07
ATOM 832 CB LEU 315 46.580 8.842 24.965 1.00 19.11
ATOM 833 CG LEU 315 45.863 8.355 26.228 1.00 20.39
ATOM 834 CD1 LEU 315 46.872 8.076 27.362 1.00 18.92
ATOM 835 CD2 LEU 315 44.848 9.401 26.655 1.00 12.93
ATOM 836 C LEU 315 47.070 6.518 24.222 1.00 24.53
ATOM 837 O LEU 315 47.394 5.615 24.992 1.00 26.32
ATOM 838 N ARG 316 46.212 6.338 23.220 1.00 28.18
ATOM 839 CA ARG 316 45.595 5.041 22.978 1.00 27.54
ATOM 840 CB ARG 316 44.575 5.155 21.848 1.00 27.39
ATOM 841 CG ARG 316 43.340 5.929 22.253 1.00 22.00
ATOM 842 CD ARG 316 42.291 5.902 21.172 1.00 18.78
ATOM 843 NE ARG 316 40.975 6.205 21.719 1.00 26.57
ATOM 844 CZ ARG 316 39.852 6.224 21.014 1.00 30.81
ATOM 845 NH1 ARG 316 39.878 5.972 19.711 1.00 33.71
ATOM 846 NH2 ARG 316 38.692 6.471 21.613 1.00 33.13
ATOM 847 C ARG 316 46.612 3.949 22.682 1.00 28.09
ATOM 848 O ARG 316 46.399 2.790 23.027 1.00 32.41
ATOM 849 N ALA 317 47.718 4.317 22.047 1.00 28.36
ATOM 850 CA ALA 317 48.771 3.359 21.744 1.00 26.64
ATOM 851 CB ALA 317 49.674 3.904 20.643 1.00 22.93
ATOM 852 C ALA 317 49.591 3.115 23.002 1.00 28.35
ATOM 853 O ALA 317 49.968 1.979 23.312 1.00 32.10
ATOM 854 N ALA 318 49.863 4.197 23.727 1.00 29.12
ATOM 855 CA ALA 318 50.655 4.123 24.953 1.00 27.50
ATOM 856 CB ALA 318 50.854 5.518 25.522 1.00 28.39
ATOM 857 C ALA 318 50.053 3.215 26.013 1.00 28.10
ATOM 858 O ALA 318 50.783 2.491 26.684 1.00 28.18

ATOM 859 N VAL 319 48.730 3.245 26.165 1.00 29.16
ATOM 860 CA VAL 319 48.082 2.414 27.176 1.00 35.24
ATOM 861 CB VAL 319 46.663 2.933 27.541 1.00 27.34
ATOM 862 CG1 VAL 319 46.759 4.324 28.136 1.00 29.96
ATOM 863 CG2 VAL 319 45.773 2.936 26.322 1.00 31.70
ATOM 864 C VAL 319 47.970 0.955 26.764 1.00 40.01
ATOM 865 O VAL 319 47.448 0.129 27.515 1.00 42.70
ATOM 866 N ARG 320 48.460 0.644 25.565 1.00 38.64
ATOM 867 CA ARG 320 48.436 -0.715 25.041 1.00 38.61
ATOM 868 CB ARG 320 47.764 -0.751 23.674 1.00 37.26
ATOM 869 CG ARG 320 46.258 -0.655 23.720 1.00 43.12
ATOM 870 CD ARG 320 45.712 -0.368 22.339 1.00 50.79
ATOM 871 NE ARG 320 44.260 -0.446 22.286 1.00 54.71
ATOM 872 CZ ARG 320 43.527 0.074 21.306 1.00 57.89
ATOM 873 NH1 ARG 320 44.119 0.713 20.300 1.00 49.08
ATOM 874 NH2 ARG 320 42.206 -0.058 21.326 1.00 59.59
ATOM 875 C ARG 320 49.852 -1.247 24.930 1.00 42.14
ATOM 876 O ARG 320 50.162 -2.055 24.051 1.00 46.30
ATOM 877 N TYR 321 50.712 -0.772 25.822 1.00 42.04
ATOM 878 CA TYR 321 52.098 -1.202 25.852 1.00 42.70
ATOM 879 CB TYR 321 52.971 -0.133 26.529 1.00 38.01
ATOM 880 CG TYR 321 54.416 -0.579 26.734 1.00 37.94
ATOM 881 CD1 TYR 321 55.275 -0.779 25.636 1.00 33.85
ATOM 882 CE1 TYR 321 56.581 -1.297 25.813 1.00 34.49
ATOM 883 CD2 TYR 321 54.892 -0.894 28.016 1.00 28.03
ATOM 884 CE2 TYR 321 56.194 -1.411 28.207 1.00 32.69
ATOM 885 CZ TYR 321 57.026 -1.614 27.103 1.00 35.18
ATOM 886 OH TYR 321 58.289 -2.158 27.288 1.00 39.48
ATOM 887 C TYR 321 52.189 -2.515 26.629 1.00 45.51
ATOM 888 O TYR 321 51.571 -2.662 27.687 1.00 48.02
ATOM 889 N ASP 322 52.945 -3.471 26.095 1.00 44.56
ATOM 890 CA ASP 322 53.129 -4.764 26.753 1.00 45.86
ATOM 891 CB ASP 322 52.697 -5.899 25.816 1.00 46.64
ATOM 892 C ASP 322 54.606 -4.910 27.098 1.00 45.82
ATOM 893 O ASP 322 55.434 -5.109 26.214 1.00 45.38
ATOM 894 N PRO 323 54.962 -4.803 28.393 1.00 46.53
ATOM 895 CD PRO 323 54.123 -4.541 29.572 1.00 47.16
ATOM 896 CA PRO 323 56.366 -4.932 28.805 1.00 46.63
ATOM 897 CB PRO 323 56.293 -4.667 30.308 1.00 43.95
ATOM 898 CG PRO 323 54.926 -5.223 30.655 1.00 43.93
ATOM 899 C PRO 323 56.993 -6.285 28.478 1.00 48.34
ATOM 900 O PRO 323 58.217 -6.407 28.379 1.00 50.84
ATOM 901 N GLU 324 56.149 -7.301 28.315 1.00 52.39
ATOM 902 CA GLU 324 56.621 -8.646 28.005 1.00 55.85
ATOM 903 CB GLU 324 55.453 -9.633 28.048 1.00 55.54
ATOM 904 C GLU 324 57.283 -8.670 26.632 1.00 54.94

ATOM 905 O GLU 324 58.460 -9.013 26.502 1.00 59.81
ATOM 906 N SER 325 56.522 -8.299 25.611 1.00 52.95
ATOM 907 CA SER 325 57.021 -8.269 24.244 1.00 50.10
ATOM 908 CB SER 325 55.889 -8.613 23.279 1.00 48.23
ATOM 909 OG SER 325 54.788 -7.749 23.471 1.00 48.71
ATOM 910 C SER 325 57.608 -6.908 23.879 1.00 50.61
ATOM 911 O SER 325 58.194 -6.743 22.808 1.00 52.19
ATOM 912 N GLU 326 57.450 -5.939 24.786 1.00 45.64
ATOM 913 CA GLU 326 57.938 -4.579 24.588 1.00 43.35
ATOM 914 CB GLU 326 59.469 -4.562 24.587 1.00 42.74
ATOM 915 CG GLU 326 60.053 -5.016 25.909 1.00 50.32
ATOM 916 CD GLU 326 61.565 -5.067 25.907 1.00 56.34
ATOM 917 OE1 GLU 326 62.139 -5.407 26.966 1.00 59.31
ATOM 918 OE2 GLU 326 62.178 -4.774 24.856 1.00 55.74
ATOM 919 C GLU 326 57.397 -3.993 23.291 1.00 40.23
ATOM 920 O GLU 326 58.145 -3.474 22.465 1.00 40.44
ATOM 921 N THR 327 56.080 -4.079 23.127 1.00 35.90
ATOM 922 CA THR 327 55.427 -3.573 21.936 1.00 37.29
ATOM 923 CB THR 327 54.983 -4.717 21.008 1.00 37.63
ATOM 924 OG1 THR 327 53.994 -5.503 21.674 1.00 38.12
ATOM 925 CG2 THR 327 56.165 -5.609 20.635 1.00 39.90
ATOM 926 C THR 327 54.170 -2.780 22.282 1.00 39.49
ATOM 927 O THR 327 53.603 -2.930 23.364 1.00 40.50
ATOM 928 N LEU 328 53.758 -1.933 21.347 1.00 36.64
ATOM 929 CA LEU 328 52.544 -1.136 21.480 1.00 37.73
ATOM 930 CB LEU 328 52.791 0.340 21.127 1.00 37.78
ATOM 931 CG LEU 328 53.667 1.257 21.982 1.00 36.26
ATOM 932 CD1 LEU 328 53.690 2.641 21.348 1.00 36.56
ATOM 933 CD2 LEU 328 53.101 1.351 23.396 1.00 39.85
ATOM 934 C LEU 328 51.617 -1.722 20.431 1.00 37.27
ATOM 935 O LEU 328 52.083 -2.233 19.410 1.00 34.96
ATOM 936 N THR 329 50.314 -1.652 20.669 1.00 39.73
ATOM 937 CA THR 329 49.368 -2.173 19.701 1.00 40.81
ATOM 938 CB THR 329 48.401 -3.176 20.349 1.00 42.67
ATOM 939 OG1 THR 329 49.156 -4.271 20.896 1.00 42.52
ATOM 940 CG2 THR 329 47.425 -3.722 19.315 1.00 43.52
ATOM 941 C THR 329 48.591 -1.034 19.058 1.00 44.31
ATOM 942 O THR 329 47.825 -0.325 19.712 1.00 43.72
ATOM 943 N LEU 330 48.822 -0.859 17.759 1.00 44.62
ATOM 944 CA LEU 330 48.179 0.182 16.972 1.00 45.09
ATOM 945 CB LEU 330 49.056 0.545 15.766 1.00 44.66
ATOM 946 CG LEU 330 50.329 1.393 15.951 1.00 51.06
ATOM 947 CD1 LEU 330 51.195 0.890 17.095 1.00 48.58
ATOM 948 CD2 LEU 330 51.107 1.387 14.638 1.00 45.18
ATOM 949 C LEU 330 46.802 -0.264 16.501 1.00 48.06
ATOM 950 O LEU 330 46.634 -1.386 16.012 1.00 49.33

ATOM 951 N ASN 331 45.826 0.618 16.663 1.00 52.20
ATOM 952 CA ASN 331 44.450 0.363 16.257 1.00 54.41
ATOM 953 CB ASN 331 44.370 0.353 14.731 1.00 54.94
ATOM 954 CG ASN 331 42.970 0.603 14.219 1.00 60.35
ATOM 955 OD1 ASN 331 42.375 1.642 14.501 1.00 61.84
ATOM 956 ND2 ASN 331 42.438 -0.344 13.459 1.00 65.92
ATOM 957 C ASN 331 43.940 -0.963 16.836 1.00 58.00
ATOM 958 O ASN 331 42.985 -1.557 16.328 1.00 60.17
ATOM 959 N GLY 332 44.590 -1.414 17.908 1.00 58.45
ATOM 960 CA GLY 332 44.215 -2.658 18.556 1.00 58.55
ATOM 961 C GLY 332 44.408 -3.880 17.680 1.00 59.79
ATOM 962 O GLY 332 43.892 -4.953 17.993 1.00 61.32
ATOM 963 N GLU 333 45.165 -3.725 16.597 1.00 60.28
ATOM 964 CA GLU 333 45.408 -4.821 15.659 1.00 59.13
ATOM 965 CB GLU 333 44.817 -4.478 14.293 1.00 62.40
ATOM 966 CG GLU 333 43.345 -4.129 14.296 1.00 75.69
ATOM 967 CD GLU 333 42.851 -3.731 12.917 1.00 80.41
ATOM 968 OE1 GLU 333 43.374 -2.740 12.359 1.00 79.98
ATOM 969 OE2 GLU 333 41.942 -4.412 12.392 1.00 83.81
ATOM 970 C GLU 333 46.881 -5.146 15.452 1.00 57.18
ATOM 971 O GLU 333 47.291 -6.301 15.545 1.00 57.50
ATOM 972 N MET 334 47.663 -4.112 15.166 1.00 55.20
ATOM 973 CA MET 334 49.085 -4.245 14.873 1.00 50.85
ATOM 974 CB MET 334 49.416 -3.334 13.687 1.00 48.70
ATOM 975 CG MET 334 50.844 -3.412 13.181 1.00 45.39
ATOM 976 SD MET 334 51.159 -2.124 11.959 1.00 44.56
ATOM 977 CE MET 334 49.908 -2.477 10.749 1.00 45.25
ATOM 978 C MET 334 50.041 -3.941 16.026 1.00 51.59
ATOM 979 O MET 334 50.104 -2.810 16.508 1.00 52.52
ATOM 980 N ALA 335 50.796 -4.946 16.450 1.00 51.00
ATOM 981 CA ALA 335 51.769 -4.787 17.527 1.00 48.98
ATOM 982 CB ALA 335 51.850 -6.062 18.347 1.00 47.86
ATOM 983 C ALA 335 53.136 -4.470 16.917 1.00 51.01
ATOM 984 O ALA 335 53.655 -5.242 16.109 1.00 51.61
ATOM 985 N VAL 336 53.718 -3.336 17.307 1.00 46.62
ATOM 986 CA VAL 336 55.016 -2.926 16.783 1.00 42.35
ATOM 987 CB VAL 336 54.876 -1.687 15.877 1.00 42.41
ATOM 988 CG1 VAL 336 53.963 -2.004 14.707 1.00 42.00
ATOM 989 CG2 VAL 336 54.313 -0.506 16.676 1.00 40.32
ATOM 990 C VAL 336 56.023 -2.608 17.883 1.00 45.33
ATOM 991 O VAL 336 55.650 -2.309 19.019 1.00 47.42
ATOM 992 N THR 337 57.310 -2.678 17.541 1.00 41.60
ATOM 993 CA THR 337 58.357 -2.381 18.508 1.00 39.69
ATOM 994 CB THR 337 59.608 -3.259 18.296 1.00 41.35
ATOM 995 OG1 THR 337 60.168 -2.985 17.007 1.00 49.35
ATOM 996 CG2 THR 337 59.253 -4.734 18.392 1.00 40.38

```
ATOM   997  C   THR  337     58.777  -0.924  18.367  1.00 37.88
ATOM   998  O   THR  337     58.312  -0.218  17.473  1.00 34.06
ATOM   999  N   ARG  338     59.655  -0.489  19.268  1.00 37.61
ATOM  1000  CA  ARG  338     60.171   0.876  19.268  1.00 38.68
ATOM  1001  CB  ARG  338     61.177   1.041  20.424  1.00 35.95
ATOM  1002  CG  ARG  338     61.804   2.434  20.570  1.00 38.83
ATOM  1003  CD  ARG  338     62.791   2.462  21.749  1.00 35.88
ATOM  1004  NE  ARG  338     62.114   2.277  23.035  1.00 37.42
ATOM  1005  CZ  ARG  338     61.858   3.256  23.902  1.00 30.20
ATOM  1006  NH1 ARG  338     62.224   4.501  23.636  1.00 27.98
ATOM  1007  NH2 ARG  338     61.213   2.992  25.025  1.00 27.40
ATOM  1008  C   ARG  338     60.843   1.158  17.925  1.00 38.09
ATOM  1009  O   ARG  338     60.529   2.142  17.251  1.00 34.12
ATOM  1010  N   GLY  339     61.755   0.267  17.535  1.00 41.25
ATOM  1011  CA  GLY  339     62.475   0.416  16.282  1.00 41.35
ATOM  1012  C   GLY  339     61.594   0.463  15.046  1.00 41.23
ATOM  1013  O   GLY  339     61.811   1.288  14.159  1.00 38.30
ATOM  1014  N   GLN  340     60.594  -0.414  14.982  1.00 38.58
ATOM  1015  CA  GLN  340     59.704  -0.449  13.826  1.00 40.79
ATOM  1016  CB  GLN  340     58.757  -1.651  13.911  1.00 40.82
ATOM  1017  CG  GLN  340     59.450  -2.995  13.944  1.00 41.10
ATOM  1018  CD  GLN  340     58.468  -4.144  13.890  1.00 48.84
ATOM  1019  OE1 GLN  340     57.529  -4.208  14.679  1.00 50.53
ATOM  1020  NE2 GLN  340     58.685  -5.068  12.959  1.00 54.25
ATOM  1021  C   GLN  340     58.884   0.822  13.679  1.00 41.50
ATOM  1022  O   GLN  340     58.725   1.342  12.576  1.00 42.72
ATOM  1023  N   LEU  341     58.360   1.324  14.795  1.00 42.00
ATOM  1024  CA  LEU  341     57.546   2.532  14.775  1.00 38.10
ATOM  1025  CB  LEU  341     56.868   2.740  16.133  1.00 36.66
ATOM  1026  CG  LEU  341     55.886   3.914  16.267  1.00 39.94
ATOM  1027  CD1 LEU  341     54.711   3.741  15.311  1.00 34.98
ATOM  1028  CD2 LEU  341     55.389   3.989  17.700  1.00 40.95
ATOM  1029  C   LEU  341     58.404   3.743  14.423  1.00 36.37
ATOM  1030  O   LEU  341     57.980   4.620  13.668  1.00 37.89
ATOM  1031  N   LYS  342     59.616   3.777  14.969  1.00 33.29
ATOM  1032  CA  LYS  342     60.542   4.872  14.723  1.00 35.17
ATOM  1033  CB  LYS  342     61.801   4.687  15.582  1.00 34.97
ATOM  1034  CG  LYS  342     62.764   5.863  15.519  1.00 40.00
ATOM  1035  CD  LYS  342     63.868   5.739  16.555  1.00 34.48
ATOM  1036  CE  LYS  342     64.709   7.001  16.596  1.00 37.54
ATOM  1037  NZ  LYS  342     65.716   6.972  17.689  1.00 42.32
ATOM  1038  C   LYS  342     60.928   4.970  13.235  1.00 38.29
ATOM  1039  O   LYS  342     60.621   5.963  12.569  1.00 36.23
ATOM  1040  N   ASN  343     61.585   3.932  12.721  1.00 39.25
ATOM  1041  CA  ASN  343     62.014   3.903  11.328  1.00 40.19
ATOM  1042  CB  ASN  343     62.808   2.627  11.050  1.00 37.96
```

ATOM 1043 CG ASN 343 63.937 2.429 12.027 1.00 39.22
ATOM 1044 OD1 ASN 343 64.648 3.376 12.374 1.00 42.37
ATOM 1045 ND2 ASN 343 64.125 1.197 12.471 1.00 42.19
ATOM 1046 C ASN 343 60.831 3.997 10.368 1.00 40.12
ATOM 1047 O ASN 343 60.991 4.371 9.208 1.00 36.01
ATOM 1048 N GLY 344 59.645 3.665 10.868 1.00 40.95
ATOM 1049 CA GLY 344 58.439 3.721 10.057 1.00 39.25
ATOM 1050 C GLY 344 57.947 5.131 9.772 1.00 38.26
ATOM 1051 O GLY 344 56.971 5.308 9.044 1.00 35.69
ATOM 1052 N GLY 345 58.604 6.135 10.359 1.00 35.89
ATOM 1053 CA GLY 345 58.212 7.510 10.110 1.00 34.00
ATOM 1054 C GLY 345 58.050 8.444 11.300 1.00 38.64
ATOM 1055 O GLY 345 57.902 9.652 11.116 1.00 38.14
ATOM 1056 N LEU 346 58.085 7.912 12.520 1.00 39.52
ATOM 1057 CA LEU 346 57.904 8.761 13.692 1.00 36.05
ATOM 1058 CB LEU 346 57.039 8.048 14.738 1.00 35.72
ATOM 1059 CG LEU 346 55.561 7.864 14.371 1.00 34.89
ATOM 1060 CD1 LEU 346 54.850 7.132 15.494 1.00 44.09
ATOM 1061 CD2 LEU 346 54.903 9.213 14.146 1.00 34.84
ATOM 1062 C LEU 346 59.189 9.264 14.339 1.00 33.52
ATOM 1063 O LEU 346 59.171 10.257 15.066 1.00 35.58
ATOM 1064 N GLY 347 60.299 8.595 14.067 1.00 30.47
ATOM 1065 CA GLY 347 61.559 9.017 14.661 1.00 33.01
ATOM 1066 C GLY 347 61.504 9.069 16.182 1.00 30.72
ATOM 1067 O GLY 347 60.967 8.160 16.812 1.00 30.89
ATOM 1068 N VAL 348 62.051 10.132 16.765 1.00 31.30
ATOM 1069 CA VAL 348 62.084 10.291 18.221 1.00 31.27
ATOM 1070 CB VAL 348 62.843 11.612 18.620 1.00 31.66
ATOM 1071 CG1 VAL 348 62.071 12.841 18.146 1.00 20.19
ATOM 1072 CG2 VAL 348 63.080 11.651 20.118 1.00 24.77
ATOM 1073 C VAL 348 60.683 10.273 18.855 1.00 33.84
ATOM 1074 O VAL 348 60.546 10.034 20.050 1.00 29.99
ATOM 1075 N VAL 349 59.649 10.518 18.049 1.00 33.31
ATOM 1076 CA VAL 349 58.270 10.495 18.538 1.00 32.23
ATOM 1077 CB VAL 349 57.279 10.911 17.415 1.00 32.59
ATOM 1078 CG1 VAL 349 55.837 10.678 17.838 1.00 33.68
ATOM 1079 CG2 VAL 349 57.474 12.378 17.103 1.00 32.30
ATOM 1080 C VAL 349 57.931 9.094 19.050 1.00 34.91
ATOM 1081 O VAL 349 57.133 8.932 19.980 1.00 33.73
ATOM 1082 N SER 350 58.551 8.081 18.444 1.00 32.81
ATOM 1083 CA SER 350 58.335 6.704 18.853 1.00 30.10
ATOM 1084 CB SER 350 59.041 5.746 17.904 1.00 24.95
ATOM 1085 OG SER 350 58.943 4.417 18.387 1.00 23.16
ATOM 1086 C SER 350 58.863 6.486 20.266 1.00 31.59
ATOM 1087 O SER 350 58.207 5.845 21.086 1.00 37.62
ATOM 1088 N ASP 351 60.055 7.007 20.546 1.00 28.60

ATOM 1089 CA ASP 351 60.652 6.863 21.867 1.00 29.82
ATOM 1090 CB ASP 351 62.048 7.491 21.919 1.00 27.49
ATOM 1091 CG ASP 351 63.030 6.806 21.000 1.00 30.22
ATOM 1092 OD1 ASP 351 63.411 7.412 19.974 1.00 32.61
ATOM 1093 OD2 ASP 351 63.422 5.661 21.301 1.00 30.02
ATOM 1094 C ASP 351 59.785 7.548 22.913 1.00 30.63
ATOM 1095 O ASP 351 59.632 7.055 24.027 1.00 29.54
ATOM 1096 N ALA 352 59.222 8.692 22.537 1.00 25.33
ATOM 1097 CA ALA 352 58.390 9.464 23.432 1.00 28.59
ATOM 1098 CB ALA 352 58.011 10.798 22.788 1.00 20.95
ATOM 1099 C ALA 352 57.136 8.695 23.831 1.00 29.69
ATOM 1100 O ALA 352 56.711 8.753 24.982 1.00 30.36
ATOM 1101 N ILE 353 56.557 7.979 22.876 1.00 27.63
ATOM 1102 CA ILE 353 55.345 7.227 23.129 1.00 27.55
ATOM 1103 CB ILE 353 54.611 6.925 21.805 1.00 28.04
ATOM 1104 CG2 ILE 353 53.329 6.111 22.065 1.00 23.68
ATOM 1105 CG1 ILE 353 54.269 8.251 21.119 1.00 27.33
ATOM 1106 CD1 ILE 353 53.637 8.105 19.734 1.00 26.23
ATOM 1107 C ILE 353 55.631 5.943 23.901 1.00 30.88
ATOM 1108 O ILE 353 54.880 5.597 24.814 1.00 31.22
ATOM 1109 N PHE 354 56.710 5.240 23.549 1.00 29.86
ATOM 1110 CA PHE 354 57.056 4.022 24.275 1.00 31.08
ATOM 1111 CB PHE 354 58.227 3.274 23.619 1.00 28.80
ATOM 1112 CG PHE 354 57.799 2.322 22.523 1.00 28.80
ATOM 1113 CD1 PHE 354 57.330 2.804 21.292 1.00 30.96
ATOM 1114 CD2 PHE 354 57.811 0.939 22.749 1.00 29.45
ATOM 1115 CE1 PHE 354 56.864 1.909 20.281 1.00 27.12
ATOM 1116 CE2 PHE 354 57.354 0.026 21.761 1.00 25.19
ATOM 1117 CZ PHE 354 56.879 0.518 20.521 1.00 28.09
ATOM 1118 C PHE 354 57.398 4.349 25.721 1.00 29.17
ATOM 1119 O PHE 354 57.001 3.625 26.631 1.00 32.62
ATOM 1120 N ASP 355 58.133 5.438 25.925 1.00 23.86
ATOM 1121 CA ASP 355 58.508 5.873 27.262 1.00 25.34
ATOM 1122 CB ASP 355 59.434 7.083 27.180 1.00 21.41
ATOM 1123 CG ASP 355 60.846 6.708 26.769 1.00 32.08
ATOM 1124 OD1 ASP 355 61.051 5.595 26.226 1.00 33.58
ATOM 1125 OD2 ASP 355 61.756 7.534 26.970 1.00 33.20
ATOM 1126 C ASP 355 57.254 6.211 28.062 1.00 27.86
ATOM 1127 O ASP 355 57.167 5.916 29.252 1.00 32.42
ATOM 1128 N LEU 356 56.276 6.821 27.401 1.00 26.84
ATOM 1129 CA LEU 356 55.031 7.164 28.066 1.00 28.66
ATOM 1130 CB LEU 356 54.112 7.953 27.131 1.00 25.37
ATOM 1131 CG LEU 356 52.787 8.427 27.742 1.00 27.61
ATOM 1132 CD1 LEU 356 53.056 9.452 28.842 1.00 25.43
ATOM 1133 CD2 LEU 356 51.924 9.057 26.667 1.00 27.49
ATOM 1134 C LEU 356 54.334 5.875 28.473 1.00 30.44

ATOM 1135 O LEU 356 53.873 5.743 29.601 1.00 31.55
ATOM 1136 N GLY 357 54.266 4.928 27.536 1.00 32.69
ATOM 1137 CA GLY 357 53.621 3.652 27.787 1.00 29.87
ATOM 1138 C GLY 357 54.239 2.884 28.939 1.00 33.12
ATOM 1139 O GLY 357 53.524 2.268 29.732 1.00 29.41
ATOM 1140 N MET 358 55.570 2.911 29.026 1.00 33.31
ATOM 1141 CA MET 358 56.277 2.217 30.100 1.00 35.87
ATOM 1142 CB MET 358 57.794 2.265 29.871 1.00 34.56
ATOM 1143 CG MET 358 58.265 1.608 28.576 1.00 46.43
ATOM 1144 SD MET 358 60.073 1.600 28.351 1.00 42.13
ATOM 1145 CE MET 358 60.429 3.306 28.411 1.00 44.29
ATOM 1146 C MET 358 55.948 2.884 31.434 1.00 33.26
ATOM 1147 O MET 358 55.802 2.222 32.453 1.00 36.39
ATOM 1148 N SER 359 55.825 4.202 31.398 1.00 33.31
ATOM 1149 CA SER 359 55.533 4.998 32.580 1.00 34.39
ATOM 1150 CB SER 359 55.859 6.463 32.303 1.00 30.84
ATOM 1151 OG SER 359 55.487 7.265 33.404 1.00 47.14
ATOM 1152 C SER 359 54.094 4.897 33.072 1.00 36.43
ATOM 1153 O SER 359 53.833 5.073 34.260 1.00 35.46
ATOM 1154 N LEU 360 53.165 4.617 32.156 1.00 36.74
ATOM 1155 CA LEU 360 51.750 4.519 32.493 1.00 35.44
ATOM 1156 CB LEU 360 50.889 4.817 31.263 1.00 34.16
ATOM 1157 CG LEU 360 50.896 6.263 30.751 1.00 34.59
ATOM 1158 CD1 LEU 360 50.031 6.353 29.513 1.00 33.53
ATOM 1159 CD2 LEU 360 50.376 7.211 31.836 1.00 31.69
ATOM 1160 C LEU 360 51.324 3.192 33.088 1.00 38.72
ATOM 1161 O LEU 360 50.185 3.058 33.546 1.00 38.29
ATOM 1162 N SER 361 52.227 2.214 33.080 1.00 40.96
ATOM 1163 CA SER 361 51.938 0.897 33.636 1.00 45.67
ATOM 1164 CB SER 361 53.131 -0.044 33.436 1.00 46.45
ATOM 1165 OG SER 361 53.362 -0.296 32.061 1.00 51.81
ATOM 1166 C SER 361 51.628 1.004 35.124 1.00 44.49
ATOM 1167 O SER 361 50.724 0.337 35.630 1.00 46.67
ATOM 1168 N SER 362 52.385 1.858 35.809 1.00 41.44
ATOM 1169 CA SER 362 52.231 2.081 37.245 1.00 42.13
ATOM 1170 CB SER 362 53.431 2.876 37.779 1.00 42.61
ATOM 1171 OG SER 362 54.647 2.215 37.492 1.00 51.87
ATOM 1172 C SER 362 50.951 2.832 37.610 1.00 38.41
ATOM 1173 O SER 362 50.444 2.700 38.722 1.00 38.01
ATOM 1174 N PHE 363 50.443 3.631 36.672 1.00 34.55
ATOM 1175 CA PHE 363 49.232 4.404 36.906 1.00 32.96
ATOM 1176 CB PHE 363 49.109 5.518 35.859 1.00 31.99
ATOM 1177 CG PHE 363 50.093 6.659 36.058 1.00 29.97
ATOM 1178 CD1 PHE 363 49.667 7.872 36.594 1.00 30.61
ATOM 1179 CD2 PHE 363 51.445 6.501 35.731 1.00 32.02
ATOM 1180 CE1 PHE 363 50.579 8.940 36.803 1.00 33.67

```
ATOM  1181  CE2 PHE  363      52.376   7.552  35.934  1.00 30.91
ATOM  1182  CZ  PHE  363      51.938   8.777  36.473  1.00 29.33
ATOM  1183  C   PHE  363      47.973   3.554  36.916  1.00 30.52
ATOM  1184  O   PHE  363      46.971   3.947  37.491  1.00 32.19
ATOM  1185  N   ASN  364      48.036   2.384  36.283  1.00 33.51
ATOM  1186  CA  ASN  364      46.894   1.471  36.216  1.00 38.03
ATOM  1187  CB  ASN  364      46.754   0.711  37.539  1.00 42.32
ATOM  1188  CG  ASN  364      47.824  -0.361  37.713  1.00 53.11
ATOM  1189  OD1 ASN  364      47.815  -1.370  37.012  1.00 59.51
ATOM  1190  ND2 ASN  364      48.751  -0.138  38.639  1.00 55.95
ATOM  1191  C   ASN  364      45.574   2.161  35.871  1.00 31.89
ATOM  1192  O   ASN  364      44.587   2.027  36.588  1.00 30.28
ATOM  1193  N   LEU  365      45.561   2.883  34.751  1.00 27.62
ATOM  1194  CA  LEU  365      44.365   3.606  34.317  1.00 29.36
ATOM  1195  CB  LEU  365      44.738   4.627  33.240  1.00 27.54
ATOM  1196  CG  LEU  365      45.826   5.659  33.576  1.00 38.91
ATOM  1197  CD1 LEU  365      46.115   6.499  32.338  1.00 34.47
ATOM  1198  CD2 LEU  365      45.394   6.546  34.743  1.00 34.24
ATOM  1199  C   LEU  365      43.264   2.691  33.774  1.00 26.23
ATOM  1200  O   LEU  365      43.546   1.648  33.197  1.00 27.06
ATOM  1201  N   ASP  366      42.011   3.074  33.991  1.00 25.23
ATOM  1202  CA  ASP  366      40.892   2.307  33.462  1.00 26.07
ATOM  1203  CB  ASP  366      39.832   2.008  34.538  1.00 29.68
ATOM  1204  CG  ASP  366      39.337   3.253  35.261  1.00 35.74
ATOM  1205  OD1 ASP  366      39.438   4.371  34.717  1.00 36.78
ATOM  1206  OD2 ASP  366      38.803   3.100  36.378  1.00 41.23
ATOM  1207  C   ASP  366      40.274   3.100  32.305  1.00 27.70
ATOM  1208  O   ASP  366      40.748   4.191  31.975  1.00 31.94
ATOM  1209  N   ASP  367      39.223   2.564  31.693  1.00 29.18
ATOM  1210  CA  ASP  367      38.594   3.233  30.560  1.00 32.72
ATOM  1211  CB  ASP  367      37.428   2.395  30.018  1.00 38.04
ATOM  1212  CG  ASP  367      37.855   0.995  29.606  1.00 42.43
ATOM  1213  OD1 ASP  367      38.913   0.852  28.956  1.00 35.95
ATOM  1214  OD2 ASP  367      37.115   0.034  29.917  1.00 51.42
ATOM  1215  C   ASP  367      38.093   4.631  30.881  1.00 33.71
ATOM  1216  O   ASP  367      38.059   5.506  30.013  1.00 38.30
ATOM  1217  N   THR  368      37.705   4.852  32.132  1.00 31.06
ATOM  1218  CA  THR  368      37.199   6.155  32.543  1.00 26.28
ATOM  1219  CB  THR  368      36.537   6.066  33.922  1.00 27.30
ATOM  1220  OG1 THR  368      35.461   5.127  33.861  1.00 33.42
ATOM  1221  CG2 THR  368      36.003   7.423  34.355  1.00 25.16
ATOM  1222  C   THR  368      38.303   7.194  32.593  1.00 21.13
ATOM  1223  O   THR  368      38.133   8.314  32.104  1.00 23.17
ATOM  1224  N   GLU  369      39.431   6.816  33.179  1.00 21.32
ATOM  1225  CA  GLU  369      40.565   7.720  33.317  1.00 28.00
ATOM  1226  CB  GLU  369      41.582   7.107  34.277  1.00 32.79
```

ATOM 1227 CG GLU 369 40.944 6.804 35.619 1.00 36.29
ATOM 1228 CD GLU 369 41.834 6.026 36.546 1.00 41.03
ATOM 1229 OE1 GLU 369 42.361 4.967 36.123 1.00 42.05
ATOM 1230 OE2 GLU 369 41.986 6.458 37.705 1.00 42.03
ATOM 1231 C GLU 369 41.201 8.047 31.970 1.00 25.57
ATOM 1232 O GLU 369 41.626 9.175 31.741 1.00 20.56
ATOM 1233 N VAL 370 41.249 7.055 31.080 1.00 25.39
ATOM 1234 CA VAL 370 41.794 7.278 29.745 1.00 25.99
ATOM 1235 CB VAL 370 42.005 5.936 28.977 1.00 26.15
ATOM 1236 CG1 VAL 370 42.450 6.216 27.539 1.00 27.65
ATOM 1237 CG2 VAL 370 43.056 5.086 29.685 1.00 17.70
ATOM 1238 C VAL 370 40.814 8.164 28.966 1.00 26.49
ATOM 1239 O VAL 370 41.226 9.038 28.202 1.00 28.16
ATOM 1240 N ALA 371 39.514 7.950 29.184 1.00 21.01
ATOM 1241 CA ALA 371 38.486 8.730 28.510 1.00 19.57
ATOM 1242 CB ALA 371 37.116 8.136 28.783 1.00 18.62
ATOM 1243 C ALA 371 38.512 10.191 28.947 1.00 23.48
ATOM 1244 O ALA 371 38.500 11.103 28.111 1.00 32.67
ATOM 1245 N LEU 372 38.540 10.414 30.256 1.00 22.89
ATOM 1246 CA LEU 372 38.560 11.772 30.806 1.00 23.28
ATOM 1247 CB LEU 372 38.517 11.709 32.343 1.00 27.76
ATOM 1248 CG LEU 372 37.155 11.306 32.924 1.00 21.18
ATOM 1249 CD1 LEU 372 37.289 10.891 34.381 1.00 27.64
ATOM 1250 CD2 LEU 372 36.197 12.480 32.763 1.00 20.90
ATOM 1251 C LEU 372 39.804 12.505 30.357 1.00 21.34
ATOM 1252 O LEU 372 39.779 13.708 30.086 1.00 23.16
ATOM 1253 N LEU 373 40.896 11.761 30.276 1.00 24.42
ATOM 1254 CA LEU 373 42.177 12.302 29.855 1.00 23.78
ATOM 1255 CB LEU 373 43.222 11.205 30.007 1.00 22.18
ATOM 1256 CG LEU 373 44.724 11.456 30.036 1.00 31.52
ATOM 1257 CD1 LEU 373 45.099 12.565 31.001 1.00 31.93
ATOM 1258 CD2 LEU 373 45.382 10.152 30.460 1.00 30.24
ATOM 1259 C LEU 373 42.025 12.757 28.399 1.00 25.69
ATOM 1260 O LEU 373 42.469 13.842 28.025 1.00 30.13
ATOM 1261 N GLN 374 41.370 11.934 27.587 1.00 26.24
ATOM 1262 CA GLN 374 41.151 12.269 26.184 1.00 21.60
ATOM 1263 CB GLN 374 40.501 11.091 25.444 1.00 24.57
ATOM 1264 CG GLN 374 41.428 9.900 25.234 1.00 21.02
ATOM 1265 CD GLN 374 40.762 8.744 24.501 1.00 22.86
ATOM 1266 OE1 GLN 374 41.407 7.754 24.174 1.00 24.07
ATOM 1267 NE2 GLN 374 39.466 8.865 24.249 1.00 25.59
ATOM 1268 C GLN 374 40.267 13.498 26.070 1.00 20.66
ATOM 1269 O GLN 374 40.518 14.366 25.242 1.00 24.47
ATOM 1270 N ALA 375 39.237 13.579 26.902 1.00 16.26
ATOM 1271 CA ALA 375 38.337 14.727 26.870 1.00 17.16
ATOM 1272 CB ALA 375 37.156 14.491 27.803 1.00 19.53

ATOM 1273 C ALA 375 39.056 16.024 27.252 1.00 25.13
ATOM 1274 O ALA 375 38.722 17.100 26.750 1.00 23.81
ATOM 1275 N VAL 376 40.036 15.926 28.156 1.00 24.57
ATOM 1276 CA VAL 376 40.796 17.101 28.568 1.00 25.80
ATOM 1277 CB VAL 376 41.711 16.792 29.814 1.00 26.48
ATOM 1278 CG1 VAL 376 42.625 17.971 30.102 1.00 23.20
ATOM 1279 CG2 VAL 376 40.845 16.521 31.044 1.00 19.08
ATOM 1280 C VAL 376 41.653 17.580 27.396 1.00 25.69
ATOM 1281 O VAL 376 41.775 18.780 27.151 1.00 27.87
ATOM 1282 N LEU 377 42.249 16.637 26.666 1.00 23.09
ATOM 1283 CA LEU 377 43.071 16.982 25.513 1.00 22.86
ATOM 1284 CB LEU 377 43.748 15.730 24.962 1.00 18.50
ATOM 1285 CG LEU 377 44.814 15.096 25.867 1.00 22.65
ATOM 1286 CD1 LEU 377 45.144 13.708 25.374 1.00 16.70
ATOM 1287 CD2 LEU 377 46.070 15.987 25.901 1.00 19.58
ATOM 1288 C LEU 377 42.197 17.634 24.430 1.00 26.14
ATOM 1289 O LEU 377 42.579 18.638 23.830 1.00 20.62
ATOM 1290 N LEU 378 41.016 17.057 24.208 1.00 28.99
ATOM 1291 CA LEU 378 40.076 17.578 23.218 1.00 28.87
ATOM 1292 CB LEU 378 38.814 16.710 23.182 1.00 26.89
ATOM 1293 CG LEU 378 37.637 17.167 22.311 1.00 28.83
ATOM 1294 CD1 LEU 378 38.053 17.273 20.840 1.00 27.97
ATOM 1295 CD2 LEU 378 36.496 16.175 22.478 1.00 27.69
ATOM 1296 C LEU 378 39.693 19.025 23.504 1.00 31.09
ATOM 1297 O LEU 378 39.812 19.883 22.629 1.00 31.77
ATOM 1298 N MET 379 39.247 19.297 24.729 1.00 31.44
ATOM 1299 CA MET 379 38.841 20.649 25.104 1.00 32.62
ATOM 1300 CB MET 379 37.876 20.603 26.293 1.00 31.45
ATOM 1301 CG MET 379 36.586 19.855 26.010 1.00 38.75
ATOM 1302 SD MET 379 35.646 20.541 24.601 1.00 41.27
ATOM 1303 CE MET 379 34.231 19.443 24.609 1.00 35.68
ATOM 1304 C MET 379 39.980 21.613 25.421 1.00 33.72
ATOM 1305 O MET 379 39.940 22.297 26.446 1.00 36.29
ATOM 1306 N SER 380 40.981 21.676 24.543 1.00 34.49
ATOM 1307 CA SER 380 42.116 22.585 24.721 1.00 33.97
ATOM 1308 CB SER 380 43.371 22.025 24.061 1.00 31.24
ATOM 1309 OG SER 380 43.771 20.814 24.674 1.00 39.42
ATOM 1310 C SER 380 41.772 23.926 24.088 1.00 39.69
ATOM 1311 O SER 380 41.787 24.069 22.864 1.00 44.64
ATOM 1312 N SER 381 41.472 24.907 24.927 1.00 41.04
ATOM 1313 CA SER 381 41.090 26.234 24.462 1.00 44.91
ATOM 1314 CB SER 381 40.406 27.004 25.594 1.00 44.50
ATOM 1315 OG SER 381 41.294 27.177 26.678 1.00 45.42
ATOM 1316 C SER 381 42.231 27.084 23.921 1.00 44.59
ATOM 1317 O SER 381 42.012 28.227 23.516 1.00 49.32
ATOM 1318 N ASP 382 43.440 26.541 23.896 1.00 43.75

ATOM 1319 CA ASP 382 44.571 27.315 23.407 1.00 43.93
ATOM 1320 CB ASP 382 45.817 27.047 24.257 1.00 48.39
ATOM 1321 CG ASP 382 46.319 25.632 24.113 1.00 53.23
ATOM 1322 OD1 ASP 382 45.590 24.702 24.517 1.00 56.97
ATOM 1323 OD2 ASP 382 47.440 25.449 23.584 1.00 58.91
ATOM 1324 C ASP 382 44.900 27.026 21.955 1.00 41.09
ATOM 1325 O ASP 382 45.912 27.502 21.446 1.00 40.93
ATOM 1326 N ARG 383 44.068 26.236 21.287 1.00 42.63
ATOM 1327 CA ARG 383 44.316 25.937 19.876 1.00 43.32
ATOM 1328 CB ARG 383 43.289 24.935 19.331 1.00 42.31
ATOM 1329 CG ARG 383 43.174 23.619 20.095 1.00 40.83
ATOM 1330 CD ARG 383 44.478 22.835 20.139 1.00 38.09
ATOM 1331 NE ARG 383 44.271 21.542 20.787 1.00 37.33
ATOM 1332 CZ ARG 383 45.235 20.690 21.115 1.00 38.35
ATOM 1333 NH1 ARG 383 46.505 20.972 20.850 1.00 33.70
ATOM 1334 NH2 ARG 383 44.922 19.545 21.704 1.00 35.46
ATOM 1335 C ARG 383 44.166 27.256 19.127 1.00 44.96
ATOM 1336 O ARG 383 43.214 28.006 19.361 1.00 45.60
ATOM 1337 N PRO 384 45.112 27.574 18.230 1.00 45.33
ATOM 1338 CD PRO 384 46.330 26.852 17.836 1.00 46.85
ATOM 1339 CA PRO 384 45.024 28.830 17.484 1.00 47.37
ATOM 1340 CB PRO 384 46.323 28.823 16.672 1.00 46.90
ATOM 1341 CG PRO 384 47.257 27.998 17.552 1.00 46.41
ATOM 1342 C PRO 384 43.788 28.910 16.590 1.00 48.29
ATOM 1343 O PRO 384 43.394 27.927 15.960 1.00 48.34
ATOM 1344 N GLY 385 43.176 30.090 16.552 1.00 49.88
ATOM 1345 CA GLY 385 42.013 30.290 15.712 1.00 50.35
ATOM 1346 C GLY 385 40.669 29.958 16.324 1.00 50.70
ATOM 1347 O GLY 385 39.639 30.201 15.697 1.00 53.48
ATOM 1348 N LEU 386 40.663 29.404 17.529 1.00 49.04
ATOM 1349 CA LEU 386 39.405 29.057 18.182 1.00 50.53
ATOM 1350 CB LEU 386 39.655 28.433 19.558 1.00 45.17
ATOM 1351 CG LEU 386 40.245 27.019 19.544 1.00 48.26
ATOM 1352 CD1 LEU 386 40.502 26.564 20.970 1.00 41.68
ATOM 1353 CD2 LEU 386 39.285 26.065 18.836 1.00 38.40
ATOM 1354 C LEU 386 38.495 30.268 18.319 1.00 52.13
ATOM 1355 O LEU 386 38.955 31.395 18.476 1.00 53.67
ATOM 1356 N ALA 387 37.193 30.020 18.261 1.00 53.42
ATOM 1357 CA ALA 387 36.225 31.093 18.354 1.00 56.01
ATOM 1358 CB ALA 387 35.221 30.976 17.202 1.00 56.47
ATOM 1359 C ALA 387 35.482 31.144 19.681 1.00 55.52
ATOM 1360 O ALA 387 35.491 32.171 20.358 1.00 53.75
ATOM 1361 N CYS 388 34.854 30.038 20.065 1.00 56.03
ATOM 1362 CA CYS 388 34.072 30.036 21.312 1.00 59.57
ATOM 1363 CB CYS 388 32.724 29.351 21.089 1.00 59.23
ATOM 1364 SG CYS 388 31.314 30.363 21.641 1.00 58.64

ATOM 1365 C CYS 388 34.846 29.289 22.398 1.00 62.18
ATOM 1366 O CYS 388 34.458 28.190 22.790 1.00 67.88
ATOM 1367 N VAL 389 35.955 29.950 22.760 1.00 60.78
ATOM 1368 CA VAL 389 37.005 29.583 23.713 1.00 57.70
ATOM 1369 CB VAL 389 38.202 30.580 23.565 1.00 57.09
ATOM 1370 CG1 VAL 389 39.351 30.194 24.494 1.00 59.03
ATOM 1371 CG2 VAL 389 38.671 30.618 22.124 1.00 53.98
ATOM 1372 C VAL 389 36.661 29.515 25.195 1.00 57.77
ATOM 1373 O VAL 389 36.943 28.513 25.851 1.00 60.94
ATOM 1374 N GLU 390 36.102 30.594 25.732 1.00 52.68
ATOM 1375 CA GLU 390 35.738 30.636 27.138 1.00 48.41
ATOM 1376 CB GLU 390 35.001 31.928 27.451 1.00 45.19
ATOM 1377 C GLU 390 34.868 29.439 27.459 1.00 47.63
ATOM 1378 O GLU 390 34.986 28.837 28.529 1.00 51.95
ATOM 1379 N ARG 391 34.002 29.082 26.517 1.00 47.11
ATOM 1380 CA ARG 391 33.099 27.950 26.699 1.00 51.64
ATOM 1381 CB ARG 391 32.050 27.930 25.588 1.00 54.22
ATOM 1382 CG ARG 391 30.830 27.094 25.915 1.00 64.20
ATOM 1383 CD ARG 391 29.867 27.074 24.748 1.00 73.80
ATOM 1384 NE ARG 391 28.533 26.622 25.128 1.00 79.76
ATOM 1385 CZ ARG 391 27.714 27.298 25.929 1.00 84.27
ATOM 1386 NH1 ARG 391 28.090 28.465 26.439 1.00 85.28
ATOM 1387 NH2 ARG 391 26.515 26.809 26.217 1.00 86.84
ATOM 1388 C ARG 391 33.890 26.644 26.684 1.00 48.18
ATOM 1389 O ARG 391 33.504 25.671 27.330 1.00 49.57
ATOM 1390 N ILE 392 34.987 26.625 25.936 1.00 45.01
ATOM 1391 CA ILE 392 35.835 25.440 25.858 1.00 48.77
ATOM 1392 CB ILE 392 36.854 25.565 24.692 1.00 46.45
ATOM 1393 CG2 ILE 392 37.798 24.370 24.679 1.00 42.35
ATOM 1394 CG1 ILE 392 36.086 25.664 23.367 1.00 49.69
ATOM 1395 CD1 ILE 392 36.950 25.897 22.136 1.00 51.09
ATOM 1396 C ILE 392 36.570 25.246 27.192 1.00 50.90
ATOM 1397 O ILE 392 36.731 24.118 27.657 1.00 52.21
ATOM 1398 N GLU 393 36.999 26.346 27.811 1.00 50.43
ATOM 1399 CA GLU 393 37.673 26.267 29.101 1.00 50.30
ATOM 1400 CB GLU 393 38.202 27.638 29.531 1.00 53.97
ATOM 1401 CG GLU 393 39.322 28.168 28.658 1.00 62.18
ATOM 1402 CD GLU 393 39.911 29.478 29.168 1.00 67.69
ATOM 1403 OE1 GLU 393 40.869 29.977 28.537 1.00 66.42
ATOM 1404 OE2 GLU 393 39.423 30.009 30.191 1.00 70.64
ATOM 1405 C GLU 393 36.686 25.765 30.145 1.00 49.31
ATOM 1406 O GLU 393 37.018 24.923 30.980 1.00 49.53
ATOM 1407 N LYS 394 35.468 26.286 30.090 1.00 46.07
ATOM 1408 CA LYS 394 34.428 25.893 31.022 1.00 45.76
ATOM 1409 CB LYS 394 33.147 26.666 30.727 1.00 43.85
ATOM 1410 C LYS 394 34.188 24.391 30.909 1.00 46.69

ATOM 1411 O LYS 394 33.982 23.699 31.911 1.00 49.13
ATOM 1412 N TYR 395 34.223 23.887 29.679 1.00 46.57
ATOM 1413 CA TYR 395 34.014 22.467 29.427 1.00 43.33
ATOM 1414 CB TYR 395 33.818 22.211 27.929 1.00 48.44
ATOM 1415 CG TYR 395 32.493 22.710 27.335 1.00 53.83
ATOM 1416 CD1 TYR 395 32.302 22.727 25.947 1.00 56.43
ATOM 1417 CE1 TYR 395 31.078 23.148 25.374 1.00 59.73
ATOM 1418 CD2 TYR 395 31.434 23.132 28.153 1.00 56.47
ATOM 1419 CE2 TYR 395 30.198 23.559 27.592 1.00 62.60
ATOM 1420 CZ TYR 395 30.037 23.562 26.200 1.00 63.18
ATOM 1421 OH TYR 395 28.834 23.962 25.635 1.00 64.46
ATOM 1422 C TYR 395 35.189 21.635 29.938 1.00 37.30
ATOM 1423 O TYR 395 34.993 20.599 30.564 1.00 34.10
ATOM 1424 N GLN 396 36.408 22.091 29.671 1.00 31.92
ATOM 1425 CA GLN 396 37.584 21.363 30.120 1.00 34.81
ATOM 1426 CB GLN 396 38.861 21.987 29.560 1.00 32.64
ATOM 1427 CG GLN 396 40.114 21.183 29.882 1.00 29.57
ATOM 1428 CD GLN 396 41.370 21.827 29.352 1.00 29.46
ATOM 1429 OE1 GLN 396 41.648 22.982 29.649 1.00 34.65
ATOM 1430 NE2 GLN 396 42.139 21.088 28.570 1.00 27.21
ATOM 1431 C GLN 396 37.647 21.342 31.647 1.00 37.13
ATOM 1432 O GLN 396 37.939 20.302 32.236 1.00 37.36
ATOM 1433 N ASP 397 37.371 22.484 32.284 1.00 38.61
ATOM 1434 CA ASP 397 37.393 22.555 33.742 1.00 40.37
ATOM 1435 CB ASP 397 37.099 23.973 34.240 1.00 40.51
ATOM 1436 CG ASP 397 38.130 24.974 33.772 1.00 43.77
ATOM 1437 OD1 ASP 397 39.330 24.632 33.775 1.00 46.50
ATOM 1438 OD2 ASP 397 37.750 26.109 33.422 1.00 51.34
ATOM 1439 C ASP 397 36.352 21.601 34.295 1.00 38.62
ATOM 1440 O ASP 397 36.515 21.034 35.372 1.00 39.20
ATOM 1441 N SER 398 35.282 21.423 33.540 1.00 37.84
ATOM 1442 CA SER 398 34.221 20.524 33.942 1.00 37.80
ATOM 1443 CB SER 398 33.039 20.669 32.984 1.00 34.28
ATOM 1444 OG SER 398 31.981 19.815 33.360 1.00 46.60
ATOM 1445 C SER 398 34.752 19.082 33.939 1.00 38.41
ATOM 1446 O SER 398 34.372 18.274 34.787 1.00 39.98
ATOM 1447 N PHE 399 35.630 18.772 32.987 1.00 34.82
ATOM 1448 CA PHE 399 36.213 17.433 32.885 1.00 35.96
ATOM 1449 CB PHE 399 36.809 17.181 31.493 1.00 35.75
ATOM 1450 CG PHE 399 35.775 16.936 30.419 1.00 39.30
ATOM 1451 CD1 PHE 399 35.640 17.826 29.344 1.00 39.86
ATOM 1452 CD2 PHE 399 34.936 15.819 30.487 1.00 36.81
ATOM 1453 CE1 PHE 399 34.674 17.607 28.330 1.00 41.25
ATOM 1454 CE2 PHE 399 33.962 15.577 29.488 1.00 43.61
ATOM 1455 CZ PHE 399 33.829 16.480 28.402 1.00 40.34
ATOM 1456 C PHE 399 37.306 17.217 33.921 1.00 33.48

ATOM 1457 O PHE 399 37.406 16.139 34.512 1.00 26.86
ATOM 1458 N LEU 400 38.132 18.239 34.118 1.00 31.47
ATOM 1459 CA LEU 400 39.213 18.162 35.086 1.00 37.41
ATOM 1460 CB LEU 400 40.051 19.441 35.038 1.00 34.24
ATOM 1461 CG LEU 400 40.934 19.574 33.788 1.00 35.10
ATOM 1462 CD1 LEU 400 41.469 20.991 33.651 1.00 26.60
ATOM 1463 CD2 LEU 400 42.077 18.569 33.884 1.00 29.44
ATOM 1464 C LEU 400 38.666 17.931 36.491 1.00 38.84
ATOM 1465 O LEU 400 39.137 17.049 37.205 1.00 40.38
ATOM 1466 N LEU 401 37.654 18.703 36.870 1.00 42.79
ATOM 1467 CA LEU 401 37.056 18.584 38.197 1.00 43.48
ATOM 1468 CB LEU 401 35.997 19.675 38.406 1.00 44.73
ATOM 1469 CG LEU 401 35.322 19.737 39.779 1.00 51.39
ATOM 1470 CD1 LEU 401 36.359 20.002 40.866 1.00 50.11
ATOM 1471 CD2 LEU 401 34.273 20.834 39.778 1.00 49.30
ATOM 1472 C LEU 401 36.433 17.215 38.409 1.00 41.62
ATOM 1473 O LEU 401 36.563 16.622 39.482 1.00 45.14
ATOM 1474 N ALA 402 35.744 16.712 37.389 1.00 37.92
ATOM 1475 CA ALA 402 35.115 15.402 37.484 1.00 29.90
ATOM 1476 CB ALA 402 34.196 15.187 36.297 1.00 30.70
ATOM 1477 C ALA 402 36.203 14.336 37.508 1.00 28.88
ATOM 1478 O ALA 402 36.083 13.322 38.188 1.00 32.14
ATOM 1479 N PHE 403 37.274 14.588 36.764 1.00 31.07
ATOM 1480 CA PHE 403 38.402 13.656 36.661 1.00 29.90
ATOM 1481 CB PHE 403 39.396 14.178 35.605 1.00 27.03
ATOM 1482 CG PHE 403 40.434 13.146 35.140 1.00 26.97
ATOM 1483 CD1 PHE 403 41.362 13.509 34.149 1.00 25.55
ATOM 1484 CD2 PHE 403 40.475 11.841 35.664 1.00 19.75
ATOM 1485 CE1 PHE 403 42.331 12.588 33.679 1.00 27.90
ATOM 1486 CE2 PHE 403 41.441 10.899 35.206 1.00 22.56
ATOM 1487 CZ PHE 403 42.371 11.273 34.210 1.00 22.24
ATOM 1488 C PHE 403 39.081 13.523 38.023 1.00 28.82
ATOM 1489 O PHE 403 39.313 12.413 38.495 1.00 26.00
ATOM 1490 N GLU 404 39.405 14.652 38.652 1.00 30.25
ATOM 1491 CA GLU 404 40.039 14.627 39.966 1.00 34.03
ATOM 1492 CB GLU 404 40.264 16.046 40.497 1.00 39.45
ATOM 1493 CG GLU 404 40.987 16.076 41.839 1.00 47.68
ATOM 1494 CD GLU 404 41.062 17.465 42.446 1.00 54.02
ATOM 1495 OE1 GLU 404 41.607 18.380 41.796 1.00 57.27
ATOM 1496 OE2 GLU 404 40.573 17.638 43.585 1.00 63.85
ATOM 1497 C GLU 404 39.164 13.860 40.960 1.00 36.01
ATOM 1498 O GLU 404 39.661 12.997 41.701 1.00 38.64
ATOM 1499 N HIS 405 37.870 14.168 40.975 1.00 29.56
ATOM 1500 CA HIS 405 36.949 13.508 41.892 1.00 31.69
ATOM 1501 CB HIS 405 35.534 14.077 41.757 1.00 33.75
ATOM 1502 CG HIS 405 35.401 15.498 42.213 1.00 34.75

ATOM 1503 CD2 HIS 405 36.308 16.361 42.730 1.00 34.58
ATOM 1504 ND1 HIS 405 34.207 16.187 42.146 1.00 32.43
ATOM 1505 CE1 HIS 405 34.385 17.414 42.598 1.00 36.15
ATOM 1506 NE2 HIS 405 35.650 17.549 42.960 1.00 39.84
ATOM 1507 C HIS 405 36.904 12.013 41.673 1.00 34.21
ATOM 1508 O HIS 405 36.700 11.247 42.624 1.00 37.06
ATOM 1509 N TYR 406 37.081 11.594 40.419 1.00 30.83
ATOM 1510 CA TYR 406 37.059 10.173 40.093 1.00 28.85
ATOM 1511 CB TYR 406 37.018 9.959 38.575 1.00 31.48
ATOM 1512 CG TYR 406 36.879 8.490 38.181 1.00 23.49
ATOM 1513 CD1 TYR 406 35.683 7.798 38.397 1.00 19.42
ATOM 1514 CE1 TYR 406 35.556 6.427 38.059 1.00 23.80
ATOM 1515 CD2 TYR 406 37.950 7.794 37.624 1.00 21.81
ATOM 1516 CE2 TYR 406 37.838 6.421 37.278 1.00 24.64
ATOM 1517 CZ TYR 406 36.639 5.753 37.503 1.00 21.56
ATOM 1518 OH TYR 406 36.537 4.404 37.186 1.00 24.96
ATOM 1519 C TYR 406 38.318 9.526 40.638 1.00 24.24
ATOM 1520 O TYR 406 38.308 8.375 41.050 1.00 27.08
ATOM 1521 N ILE 407 39.407 10.278 40.617 1.00 25.76
ATOM 1522 CA ILE 407 40.688 9.799 41.105 1.00 33.75
ATOM 1523 CB ILE 407 41.815 10.822 40.796 1.00 34.23
ATOM 1524 CG2 ILE 407 43.121 10.400 41.435 1.00 32.46
ATOM 1525 CG1 ILE 407 41.959 10.972 39.275 1.00 43.30
ATOM 1526 CD1 ILE 407 42.267 9.677 38.523 1.00 40.40
ATOM 1527 C ILE 407 40.620 9.556 42.613 1.00 39.03
ATOM 1528 O ILE 407 41.192 8.583 43.107 1.00 35.18
ATOM 1529 N ASN 408 39.916 10.440 43.335 1.00 37.25
ATOM 1530 CA ASN 408 39.778 10.292 44.777 1.00 37.01
ATOM 1531 CB ASN 408 39.099 11.514 45.400 1.00 32.27
ATOM 1532 CG ASN 408 39.887 12.790 45.187 1.00 33.56
ATOM 1533 OD1 ASN 408 41.118 12.785 45.225 1.00 31.99
ATOM 1534 ND2 ASN 408 39.182 13.903 44.996 1.00 31.23
ATOM 1535 C ASN 408 38.961 9.046 45.055 1.00 38.14
ATOM 1536 O ASN 408 39.303 8.243 45.920 1.00 42.16
ATOM 1537 N TYR 409 37.874 8.894 44.303 1.00 35.62
ATOM 1538 CA TYR 409 37.002 7.733 44.412 1.00 35.91
ATOM 1539 CB TYR 409 35.929 7.804 43.323 1.00 34.41
ATOM 1540 CG TYR 409 35.196 6.495 43.066 1.00 38.73
ATOM 1541 CD1 TYR 409 34.266 5.982 43.980 1.00 41.34
ATOM 1542 CE1 TYR 409 33.600 4.745 43.741 1.00 47.16
ATOM 1543 CD2 TYR 409 35.461 5.752 41.907 1.00 46.20
ATOM 1544 CE2 TYR 409 34.814 4.518 41.651 1.00 50.74
ATOM 1545 CZ TYR 409 33.891 4.023 42.573 1.00 50.88
ATOM 1546 OH TYR 409 33.262 2.816 42.302 1.00 53.14
ATOM 1547 C TYR 409 37.827 6.459 44.240 1.00 38.16
ATOM 1548 O TYR 409 37.806 5.561 45.082 1.00 41.83

ATOM 1549 N ARG 410 38.551 6.399 43.125 1.00 42.25
ATOM 1550 CA ARG 410 39.410 5.272 42.765 1.00 42.83
ATOM 1551 CB ARG 410 40.029 5.540 41.392 1.00 36.83
ATOM 1552 CG ARG 410 39.055 5.397 40.249 1.00 34.32
ATOM 1553 CD ARG 410 39.134 3.996 39.681 1.00 36.62
ATOM 1554 NE ARG 410 40.420 3.787 39.013 1.00 38.64
ATOM 1555 CZ ARG 410 40.832 2.625 38.517 1.00 35.73
ATOM 1556 NH1 ARG 410 40.068 1.548 38.617 1.00 33.17
ATOM 1557 NH2 ARG 410 42.006 2.544 37.916 1.00 32.70
ATOM 1558 C ARG 410 40.520 5.039 43.780 1.00 46.67
ATOM 1559 O ARG 410 40.900 3.901 44.053 1.00 41.78
ATOM 1560 N LYS 411 41.026 6.140 44.325 1.00 52.99
ATOM 1561 CA LYS 411 42.109 6.141 45.298 1.00 58.32
ATOM 1562 CB LYS 411 41.565 5.956 46.731 1.00 64.99
ATOM 1563 CG LYS 411 40.660 4.763 46.977 1.00 70.48
ATOM 1564 CD LYS 411 40.034 4.866 48.364 1.00 77.18
ATOM 1565 CE LYS 411 39.053 3.732 48.625 1.00 84.30
ATOM 1566 NZ LYS 411 38.392 3.865 49.958 1.00 86.48
ATOM 1567 C LYS 411 43.238 5.163 45.000 1.00 56.66
ATOM 1568 O LYS 411 43.329 4.075 45.575 1.00 55.47
ATOM 1569 N HIS 412 44.091 5.582 44.070 1.00 54.67
ATOM 1570 CA HIS 412 45.266 4.823 43.657 1.00 48.67
ATOM 1571 CB HIS 412 45.878 5.442 42.393 1.00 43.14
ATOM 1572 CG HIS 412 45.073 5.218 41.156 1.00 41.36
ATOM 1573 CD2 HIS 412 44.084 5.952 40.584 1.00 35.44
ATOM 1574 ND1 HIS 412 45.220 4.093 40.364 1.00 38.19
ATOM 1575 CE1 HIS 412 44.357 4.150 39.363 1.00 34.75
ATOM 1576 NE2 HIS 412 43.659 5.263 39.474 1.00 35.52
ATOM 1577 C HIS 412 46.264 4.932 44.793 1.00 46.35
ATOM 1578 O HIS 412 46.326 5.951 45.479 1.00 42.73
ATOM 1579 N HIS 413 47.049 3.883 44.993 1.00 48.92
ATOM 1580 CA HIS 413 48.040 3.903 46.052 1.00 53.15
ATOM 1581 CB HIS 413 48.148 2.515 46.688 1.00 55.27
ATOM 1582 CG HIS 413 46.843 2.015 47.238 1.00 58.77
ATOM 1583 CD2 HIS 413 46.138 0.892 46.977 1.00 61.65
ATOM 1584 ND1 HIS 413 46.108 2.726 48.161 1.00 60.31
ATOM 1585 CE1 HIS 413 45.003 2.061 48.445 1.00 63.01
ATOM 1586 NE2 HIS 413 44.993 0.942 47.743 1.00 62.93
ATOM 1587 C HIS 413 49.359 4.364 45.456 1.00 53.19
ATOM 1588 O HIS 413 50.335 3.617 45.390 1.00 54.93
ATOM 1589 N VAL 414 49.343 5.612 44.999 1.00 53.77
ATOM 1590 CA VAL 414 50.487 6.282 44.389 1.00 51.06
ATOM 1591 CB VAL 414 50.374 6.305 42.838 1.00 51.49
ATOM 1592 CG1 VAL 414 51.603 6.958 42.231 1.00 45.22
ATOM 1593 CG2 VAL 414 50.210 4.891 42.304 1.00 52.67
ATOM 1594 C VAL 414 50.444 7.724 44.894 1.00 54.28

ATOM 1595 O VAL 414 49.418 8.401 44.774 1.00 55.49
ATOM 1596 N THR 415 51.547 8.190 45.467 1.00 56.28
ATOM 1597 CA THR 415 51.610 9.550 45.986 1.00 57.83
ATOM 1598 CB THR 415 52.874 9.756 46.858 1.00 59.64
ATOM 1599 OG1 THR 415 52.922 11.115 47.311 1.00 66.69
ATOM 1600 CG2 THR 415 54.137 9.436 46.067 1.00 59.42
ATOM 1601 C THR 415 51.599 10.577 44.855 1.00 56.98
ATOM 1602 O THR 415 52.176 10.345 43.789 1.00 55.70
ATOM 1603 N HIS 416 50.936 11.707 45.093 1.00 57.44
ATOM 1604 CA HIS 416 50.835 12.786 44.108 1.00 57.34
ATOM 1605 CB HIS 416 52.207 13.425 43.875 1.00 61.35
ATOM 1606 CG HIS 416 52.860 13.940 45.123 1.00 69.78
ATOM 1607 CD2 HIS 416 54.049 13.633 45.695 1.00 71.42
ATOM 1608 ND1 HIS 416 52.283 14.901 45.922 1.00 72.49
ATOM 1609 CE1 HIS 416 53.087 15.165 46.938 1.00 75.50
ATOM 1610 NE2 HIS 416 54.165 14.410 46.819 1.00 73.91
ATOM 1611 C HIS 416 50.301 12.260 42.773 1.00 53.79
ATOM 1612 O HIS 416 50.769 12.667 41.710 1.00 52.81
ATOM 1613 N PHE 417 49.318 11.366 42.824 1.00 48.05
ATOM 1614 CA PHE 417 48.769 10.784 41.610 1.00 47.99
ATOM 1615 CB PHE 417 47.652 9.799 41.940 1.00 46.11
ATOM 1616 CG PHE 417 47.314 8.868 40.791 1.00 44.27
ATOM 1617 CD1 PHE 417 48.155 7.796 40.481 1.00 41.79
ATOM 1618 CD2 PHE 417 46.179 9.091 40.003 1.00 40.23
ATOM 1619 CE1 PHE 417 47.872 6.936 39.386 1.00 44.30
ATOM 1620 CE2 PHE 417 45.874 8.248 38.907 1.00 36.80
ATOM 1621 CZ PHE 417 46.725 7.167 38.595 1.00 40.69
ATOM 1622 C PHE 417 48.227 11.824 40.625 1.00 46.69
ATOM 1623 O PHE 417 48.551 11.787 39.436 1.00 43.35
ATOM 1624 N TRP 418 47.410 12.746 41.124 1.00 45.14
ATOM 1625 CA TRP 418 46.821 13.775 40.276 1.00 44.89
ATOM 1626 CB TRP 418 45.808 14.604 41.077 1.00 42.24
ATOM 1627 CG TRP 418 45.096 15.646 40.259 1.00 47.11
ATOM 1628 CD2 TRP 418 44.186 15.417 39.159 1.00 46.98
ATOM 1629 CE2 TRP 418 43.786 16.678 38.676 1.00 48.94
ATOM 1630 CE3 TRP 418 43.676 14.261 38.548 1.00 45.23
ATOM 1631 CD1 TRP 418 45.204 17.003 40.387 1.00 46.24
ATOM 1632 NE1 TRP 418 44.425 17.637 39.448 1.00 50.63
ATOM 1633 CZ2 TRP 418 42.891 16.839 37.598 1.00 45.46
ATOM 1634 CZ3 TRP 418 42.780 14.411 37.468 1.00 44.50
ATOM 1635 CH2 TRP 418 42.403 15.696 37.009 1.00 47.55
ATOM 1636 C TRP 418 47.862 14.676 39.598 1.00 43.88
ATOM 1637 O TRP 418 47.834 14.842 38.383 1.00 43.17
ATOM 1638 N PRO 419 48.788 15.281 40.369 1.00 43.55
ATOM 1639 CD PRO 419 49.006 15.290 41.826 1.00 41.52
ATOM 1640 CA PRO 419 49.787 16.135 39.725 1.00 41.48

ATOM 1641 CB PRO 419 50.626 16.627 40.912 1.00 39.21
ATOM 1642 CG PRO 419 49.593 16.667 42.017 1.00 39.25
ATOM 1643 C PRO 419 50.616 15.363 38.701 1.00 36.28
ATOM 1644 O PRO 419 50.940 15.882 37.638 1.00 37.08
ATOM 1645 N LYS 420 50.959 14.124 39.033 1.00 35.96
ATOM 1646 CA LYS 420 51.742 13.281 38.132 1.00 40.82
ATOM 1647 CB LYS 420 52.094 11.945 38.792 1.00 40.78
ATOM 1648 CG LYS 420 53.086 12.046 39.933 1.00 48.62
ATOM 1649 CD LYS 420 53.391 10.668 40.497 1.00 55.12
ATOM 1650 CE LYS 420 54.395 10.741 41.635 1.00 53.26
ATOM 1651 NZ LYS 420 54.719 9.388 42.152 1.00 52.69
ATOM 1652 C LYS 420 50.957 13.005 36.860 1.00 40.29
ATOM 1653 O LYS 420 51.516 12.989 35.764 1.00 39.66
ATOM 1654 N LEU 421 49.658 12.786 37.023 1.00 38.33
ATOM 1655 CA LEU 421 48.784 12.507 35.903 1.00 37.60
ATOM 1656 CB LEU 421 47.417 12.074 36.428 1.00 43.66
ATOM 1657 CG LEU 421 46.386 11.479 35.474 1.00 46.50
ATOM 1658 CD1 LEU 421 46.946 10.253 34.770 1.00 45.15
ATOM 1659 CD2 LEU 421 45.154 11.107 36.279 1.00 51.31
ATOM 1660 C LEU 421 48.661 13.747 35.014 1.00 39.59
ATOM 1661 O LEU 421 48.599 13.638 33.791 1.00 40.66
ATOM 1662 N LEU 422 48.642 14.928 35.623 1.00 39.57
ATOM 1663 CA LEU 422 48.545 16.170 34.867 1.00 38.63
ATOM 1664 CB LEU 422 48.313 17.357 35.802 1.00 41.79
ATOM 1665 CG LEU 422 46.996 17.407 36.581 1.00 42.74
ATOM 1666 CD1 LEU 422 47.010 18.606 37.515 1.00 42.89
ATOM 1667 CD2 LEU 422 45.823 17.494 35.628 1.00 39.27
ATOM 1668 C LEU 422 49.808 16.410 34.039 1.00 40.47
ATOM 1669 O LEU 422 49.747 17.029 32.979 1.00 47.83
ATOM 1670 N MET 423 50.949 15.936 34.519 1.00 34.27
ATOM 1671 CA MET 423 52.187 16.103 33.774 1.00 35.25
ATOM 1672 CB MET 423 53.403 15.716 34.622 1.00 32.56
ATOM 1673 CG MET 423 53.675 16.654 35.774 1.00 40.70
ATOM 1674 SD MET 423 55.226 16.278 36.597 1.00 47.65
ATOM 1675 CE MET 423 54.920 14.601 37.163 1.00 47.16
ATOM 1676 C MET 423 52.164 15.254 32.502 1.00 35.13
ATOM 1677 O MET 423 52.934 15.499 31.570 1.00 29.85
ATOM 1678 N LYS 424 51.285 14.252 32.482 1.00 31.56
ATOM 1679 CA LYS 424 51.152 13.384 31.316 1.00 32.29
ATOM 1680 CB LYS 424 50.373 12.115 31.681 1.00 30.56
ATOM 1681 CG LYS 424 51.106 11.178 32.631 1.00 30.07
ATOM 1682 CD LYS 424 52.248 10.482 31.938 1.00 33.22
ATOM 1683 CE LYS 424 53.059 9.593 32.875 1.00 28.75
ATOM 1684 NZ LYS 424 53.868 10.383 33.833 1.00 31.01
ATOM 1685 C LYS 424 50.435 14.150 30.197 1.00 29.26
ATOM 1686 O LYS 424 50.719 13.944 29.030 1.00 30.22

ATOM 1687 N VAL 425 49.514 15.036 30.573 1.00 23.53
ATOM 1688 CA VAL 425 48.792 15.849 29.601 1.00 28.91
ATOM 1689 CB VAL 425 47.808 16.829 30.295 1.00 29.44
ATOM 1690 CG1 VAL 425 47.148 17.737 29.273 1.00 28.81
ATOM 1691 CG2 VAL 425 46.744 16.049 31.057 1.00 31.22
ATOM 1692 C VAL 425 49.822 16.669 28.831 1.00 32.03
ATOM 1693 O VAL 425 49.771 16.769 27.605 1.00 31.95
ATOM 1694 N THR 426 50.763 17.247 29.570 1.00 33.61
ATOM 1695 CA THR 426 51.821 18.057 28.995 1.00 30.76
ATOM 1696 CB THR 426 52.678 18.695 30.105 1.00 32.34
ATOM 1697 OG1 THR 426 51.842 19.535 30.912 1.00 33.07
ATOM 1698 CG2 THR 426 53.812 19.533 29.514 1.00 25.40
ATOM 1699 C THR 426 52.712 17.225 28.086 1.00 32.53
ATOM 1700 O THR 426 53.113 17.686 27.014 1.00 35.19
ATOM 1701 N ASP 427 53.022 16.003 28.507 1.00 28.83
ATOM 1702 CA ASP 427 53.858 15.130 27.695 1.00 35.12
ATOM 1703 CB ASP 427 54.273 13.880 28.476 1.00 39.14
ATOM 1704 CG ASP 427 55.122 14.212 29.693 1.00 45.80
ATOM 1705 OD1 ASP 427 56.052 15.034 29.556 1.00 41.97
ATOM 1706 OD2 ASP 427 54.869 13.642 30.775 1.00 50.06
ATOM 1707 C ASP 427 53.124 14.726 26.422 1.00 33.94
ATOM 1708 O ASP 427 53.737 14.617 25.362 1.00 38.02
ATOM 1709 N LEU 428 51.818 14.512 26.529 1.00 27.15
ATOM 1710 CA LEU 428 51.013 14.148 25.373 1.00 29.99
ATOM 1711 CB LEU 428 49.602 13.719 25.802 1.00 22.49
ATOM 1712 CG LEU 428 49.541 12.285 26.359 1.00 25.54
ATOM 1713 CD1 LEU 428 48.210 12.021 27.037 1.00 20.60
ATOM 1714 CD2 LEU 428 49.785 11.303 25.224 1.00 17.24
ATOM 1715 C LEU 428 50.947 15.305 24.381 1.00 28.94
ATOM 1716 O LEU 428 50.941 15.088 23.174 1.00 31.26
ATOM 1717 N ARG 429 50.910 16.531 24.887 1.00 27.64
ATOM 1718 CA ARG 429 50.877 17.694 24.011 1.00 28.13
ATOM 1719 CB ARG 429 50.584 18.969 24.800 1.00 29.59
ATOM 1720 CG ARG 429 49.224 18.980 25.455 1.00 34.85
ATOM 1721 CD ARG 429 48.951 20.314 26.118 1.00 47.18
ATOM 1722 NE ARG 429 47.657 20.358 26.797 1.00 57.93
ATOM 1723 CZ ARG 429 46.473 20.193 26.200 1.00 63.62
ATOM 1724 NH1 ARG 429 46.402 19.972 24.889 1.00 60.71
ATOM 1725 NH2 ARG 429 45.356 20.257 26.919 1.00 62.38
ATOM 1726 C ARG 429 52.229 17.819 23.304 1.00 29.81
ATOM 1727 O ARG 429 52.294 18.209 22.143 1.00 30.81
ATOM 1728 N MET 430 53.305 17.482 24.008 1.00 29.64
ATOM 1729 CA MET 430 54.639 17.545 23.422 1.00 34.72
ATOM 1730 CB MET 430 55.716 17.323 24.485 1.00 34.97
ATOM 1731 CG MET 430 55.864 18.480 25.451 1.00 45.34
ATOM 1732 SD MET 430 56.162 20.050 24.596 1.00 52.55

ATOM 1733 CE MET 430 57.598 19.639 23.589 1.00 55.56
ATOM 1734 C MET 430 54.778 16.500 22.325 1.00 34.01
ATOM 1735 O MET 430 55.440 16.733 21.318 1.00 37.29
ATOM 1736 N ILE 431 54.161 15.340 22.533 1.00 29.99
ATOM 1737 CA ILE 431 54.197 14.279 21.545 1.00 28.82
ATOM 1738 CB ILE 431 53.523 12.984 22.095 1.00 27.39
ATOM 1739 CG2 ILE 431 53.260 11.989 20.956 1.00 23.87
ATOM 1740 CG1 ILE 431 54.414 12.386 23.201 1.00 25.56
ATOM 1741 CD1 ILE 431 53.850 11.155 23.896 1.00 17.29
ATOM 1742 C ILE 431 53.450 14.785 20.301 1.00 29.49
ATOM 1743 O ILE 431 53.908 14.603 19.174 1.00 24.19
ATOM 1744 N GLY 432 52.311 15.435 20.524 1.00 25.25
ATOM 1745 CA GLY 432 51.542 15.971 19.419 1.00 30.38
ATOM 1746 C GLY 432 52.334 16.997 18.614 1.00 32.75
ATOM 1747 O GLY 432 52.410 16.895 17.387 1.00 36.38
ATOM 1748 N ALA 433 52.930 17.974 19.294 1.00 26.77
ATOM 1749 CA ALA 433 53.711 19.012 18.625 1.00 26.48
ATOM 1750 CB ALA 433 54.182 20.047 19.631 1.00 19.90
ATOM 1751 C ALA 433 54.902 18.407 17.890 1.00 30.73
ATOM 1752 O ALA 433 55.207 18.787 16.760 1.00 31.60
ATOM 1753 N CYS 434 55.582 17.467 18.537 1.00 33.22
ATOM 1754 CA CYS 434 56.728 16.801 17.914 1.00 34.34
ATOM 1755 CB CYS 434 57.339 15.808 18.895 1.00 35.20
ATOM 1756 SG CYS 434 59.191 15.745 18.798 1.00 54.48
ATOM 1757 C CYS 434 56.313 16.052 16.636 1.00 34.09
ATOM 1758 O CYS 434 57.095 15.937 15.679 1.00 34.89
ATOM 1759 N HIS 435 55.088 15.545 16.642 1.00 34.30
ATOM 1760 CA HIS 435 54.570 14.818 15.501 1.00 35.44
ATOM 1761 CB HIS 435 53.296 14.061 15.886 1.00 31.76
ATOM 1762 CG HIS 435 52.587 13.469 14.715 1.00 32.03
ATOM 1763 CD2 HIS 435 52.735 12.277 14.092 1.00 28.61
ATOM 1764 ND1 HIS 435 51.665 14.177 13.970 1.00 28.48
ATOM 1765 CE1 HIS 435 51.284 13.453 12.941 1.00 33.27
ATOM 1766 NE2 HIS 435 51.920 12.284 12.985 1.00 31.57
ATOM 1767 C HIS 435 54.311 15.750 14.319 1.00 32.74
ATOM 1768 O HIS 435 54.504 15.363 13.175 1.00 32.87
ATOM 1769 N ALA 436 53.881 16.975 14.608 1.00 31.01
ATOM 1770 CA ALA 436 53.628 17.966 13.571 1.00 29.91
ATOM 1771 CB ALA 436 53.221 19.290 14.197 1.00 21.23
ATOM 1772 C ALA 436 54.911 18.135 12.769 1.00 33.86
ATOM 1773 O ALA 436 54.892 18.128 11.541 1.00 36.10
ATOM 1774 N SER 437 56.030 18.266 13.483 1.00 35.19
ATOM 1775 CA SER 437 57.344 18.426 12.871 1.00 33.03
ATOM 1776 CB SER 437 58.389 18.720 13.941 1.00 35.31
ATOM 1777 OG SER 437 59.681 18.782 13.373 1.00 44.99
ATOM 1778 C SER 437 57.758 17.178 12.100 1.00 38.39

ATOM 1779 O SER 437 58.374 17.269 11.034 1.00 37.54
ATOM 1780 N ARG 438 57.427 16.012 12.642 1.00 37.32
ATOM 1781 CA ARG 438 57.762 14.754 11.992 1.00 39.30
ATOM 1782 CB ARG 438 57.517 13.572 12.941 1.00 42.97
ATOM 1783 CG ARG 438 58.542 13.436 14.059 1.00 41.72
ATOM 1784 CD ARG 438 59.926 13.212 13.484 1.00 45.23
ATOM 1785 NE ARG 438 59.961 12.050 12.601 1.00 45.66
ATOM 1786 CZ ARG 438 60.935 11.804 11.731 1.00 49.71
ATOM 1787 NH1 ARG 438 61.961 12.641 11.627 1.00 50.91
ATOM 1788 NH2 ARG 438 60.885 10.727 10.960 1.00 46.86
ATOM 1789 C ARG 438 56.939 14.565 10.725 1.00 42.37
ATOM 1790 O ARG 438 57.311 13.794 9.841 1.00 40.58
ATOM 1791 N PHE 439 55.816 15.269 10.645 1.00 42.25
ATOM 1792 CA PHE 439 54.957 15.170 9.479 1.00 42.81
ATOM 1793 CB PHE 439 53.593 15.790 9.771 1.00 42.18
ATOM 1794 CG PHE 439 52.594 15.597 8.656 1.00 42.48
ATOM 1795 CD1 PHE 439 52.173 14.312 8.295 1.00 47.09
ATOM 1796 CD2 PHE 439 52.086 16.696 7.961 1.00 39.76
ATOM 1797 CE1 PHE 439 51.256 14.110 7.234 1.00 49.17
ATOM 1798 CE2 PHE 439 51.174 16.524 6.896 1.00 45.10
ATOM 1799 CZ PHE 439 50.751 15.225 6.532 1.00 46.36
ATOM 1800 C PHE 439 55.626 15.905 8.322 1.00 44.79
ATOM 1801 O PHE 439 55.596 15.444 7.181 1.00 40.26
ATOM 1802 N LEU 440 56.236 17.049 8.629 1.00 42.77
ATOM 1803 CA LEU 440 56.927 17.839 7.621 1.00 42.96
ATOM 1804 CB LEU 440 57.421 19.156 8.216 1.00 37.19
ATOM 1805 CG LEU 440 56.348 20.117 8.725 1.00 36.97
ATOM 1806 CD1 LEU 440 57.020 21.338 9.321 1.00 33.65
ATOM 1807 CD2 LEU 440 55.411 20.519 7.572 1.00 35.42
ATOM 1808 C LEU 440 58.106 17.063 7.053 1.00 45.47
ATOM 1809 O LEU 440 58.421 17.191 5.876 1.00 52.48
ATOM 1810 N HIS 441 58.760 16.266 7.890 1.00 49.15
ATOM 1811 CA HIS 441 59.893 15.473 7.435 1.00 54.76
ATOM 1812 CB HIS 441 60.723 14.964 8.624 1.00 56.68
ATOM 1813 CG HIS 441 61.515 16.026 9.323 1.00 62.73
ATOM 1814 CD2 HIS 441 62.851 16.166 9.508 1.00 65.73
ATOM 1815 ND1 HIS 441 60.929 17.098 9.966 1.00 66.01
ATOM 1816 CE1 HIS 441 61.871 17.845 10.518 1.00 65.55
ATOM 1817 NE2 HIS 441 63.044 17.306 10.258 1.00 60.09
ATOM 1818 C HIS 441 59.417 14.292 6.589 1.00 55.93
ATOM 1819 O HIS 441 60.084 13.908 5.630 1.00 57.33
ATOM 1820 N MET 442 58.271 13.716 6.948 1.00 57.81
ATOM 1821 CA MET 442 57.712 12.585 6.203 1.00 59.11
ATOM 1822 CB MET 442 56.562 11.924 6.978 1.00 55.93
ATOM 1823 CG MET 442 56.961 11.246 8.276 1.00 58.52
ATOM 1824 SD MET 442 55.564 10.420 9.105 1.00 60.99

```
ATOM  1825  CE  MET   442      54.430  11.779   9.350  1.00 52.61
ATOM  1826  C   MET   442      57.178  13.065   4.854  1.00 60.31
ATOM  1827  O   MET   442      57.279  12.369   3.846  1.00 58.18
ATOM  1828  N   LYS   443      56.608  14.266   4.863  1.00 61.45
ATOM  1829  CA  LYS   443      56.038  14.871   3.669  1.00 64.90
ATOM  1830  CB  LYS   443      55.434  16.232   4.035  1.00 64.40
ATOM  1831  CG  LYS   443      54.589  16.872   2.945  1.00 69.12
ATOM  1832  CD  LYS   443      54.064  18.250   3.363  1.00 71.14
ATOM  1833  CE  LYS   443      53.138  18.183   4.575  1.00 73.43
ATOM  1834  NZ  LYS   443      52.668  19.534   5.015  1.00 67.97
ATOM  1835  C   LYS   443      57.112  15.030   2.585  1.00 67.29
ATOM  1836  O   LYS   443      56.800  15.218   1.406  1.00 67.90
ATOM  1837  N   VAL   444      58.373  14.941   2.996  1.00 66.57
ATOM  1838  CA  VAL   444      59.501  15.064   2.078  1.00 64.76
ATOM  1839  CB  VAL   444      60.618  15.940   2.693  1.00 62.76
ATOM  1840  CG1 VAL   444      61.767  16.092   1.712  1.00 64.00
ATOM  1841  CG2 VAL   444      60.062  17.301   3.072  1.00 59.27
ATOM  1842  C   VAL   444      60.091  13.693   1.744  1.00 68.61
ATOM  1843  O   VAL   444      60.145  13.294   0.577  1.00 70.60
ATOM  1844  N   GLU   445      60.520  12.972   2.775  1.00 70.71
ATOM  1845  CA  GLU   445      61.129  11.653   2.609  1.00 71.45
ATOM  1846  CB  GLU   445      61.808  11.233   3.916  1.00 72.36
ATOM  1847  C   GLU   445      60.181  10.547   2.148  1.00 71.46
ATOM  1848  O   GLU   445      60.588   9.390   2.042  1.00 73.02
ATOM  1849  N   CYS   446      58.925  10.895   1.871  1.00 71.12
ATOM  1850  CA  CYS   446      57.945   9.901   1.419  1.00 70.83
ATOM  1851  CB  CYS   446      57.031   9.485   2.581  1.00 71.05
ATOM  1852  SG  CYS   446      57.845   8.593   3.925  1.00 72.83
ATOM  1853  C   CYS   446      57.081  10.390   0.261  1.00 71.91
ATOM  1854  O   CYS   446      56.776  11.582   0.155  1.00 72.06
ATOM  1855  N   PRO   447      56.673   9.470  -0.635  1.00 73.12
ATOM  1856  CD  PRO   447      56.967   8.026  -0.671  1.00 72.88
ATOM  1857  CA  PRO   447      55.837   9.825  -1.784  1.00 74.22
ATOM  1858  CB  PRO   447      55.717   8.500  -2.537  1.00 72.98
ATOM  1859  CG  PRO   447      57.015   7.790  -2.161  1.00 74.77
ATOM  1860  C   PRO   447      54.479  10.343  -1.330  1.00 75.94
ATOM  1861  O   PRO   447      53.754   9.652  -0.616  1.00 76.67
ATOM  1862  N   THR   448      54.145  11.558  -1.755  1.00 76.91
ATOM  1863  CA  THR   448      52.879  12.197  -1.403  1.00 78.24
ATOM  1864  CB  THR   448      52.647  13.459  -2.261  1.00 81.33
ATOM  1865  OG1 THR   448      52.552  13.087  -3.643  1.00 84.46
ATOM  1866  CG2 THR   448      53.802  14.444  -2.089  1.00 83.51
ATOM  1867  C   THR   448      51.676  11.270  -1.580  1.00 77.42
ATOM  1868  O   THR   448      50.662  11.413  -0.894  1.00 77.65
ATOM  1869  N   GLU   449      51.795  10.319  -2.502  1.00 76.29
ATOM  1870  CA  GLU   449      50.720   9.375  -2.783  1.00 75.03
```

ATOM 1871 CB GLU 449 51.048 8.572 -4.043 1.00 74.62
ATOM 1872 C GLU 449 50.445 8.421 -1.622 1.00 73.49
ATOM 1873 O GLU 449 49.310 7.973 -1.442 1.00 70.24
ATOM 1874 N LEU 450 51.477 8.113 -0.840 1.00 70.80
ATOM 1875 CA LEU 450 51.327 7.194 0.285 1.00 68.82
ATOM 1876 CB LEU 450 52.693 6.644 0.705 1.00 71.91
ATOM 1877 CG LEU 450 53.428 5.795 -0.336 1.00 76.62
ATOM 1878 CD1 LEU 450 54.799 5.414 0.195 1.00 77.95
ATOM 1879 CD2 LEU 450 52.617 4.546 -0.662 1.00 76.46
ATOM 1880 C LEU 450 50.636 7.818 1.492 1.00 66.22
ATOM 1881 O LEU 450 50.501 7.181 2.540 1.00 66.01
ATOM 1882 N PHE 451 50.189 9.060 1.342 1.00 61.96
ATOM 1883 CA PHE 451 49.513 9.750 2.428 1.00 58.44
ATOM 1884 CB PHE 451 50.006 11.204 2.528 1.00 61.34
ATOM 1885 CG PHE 451 51.466 11.343 2.923 1.00 63.02
ATOM 1886 CD1 PHE 451 52.488 10.888 2.077 1.00 62.92
ATOM 1887 CD2 PHE 451 51.812 11.932 4.146 1.00 63.07
ATOM 1888 CE1 PHE 451 53.855 11.029 2.437 1.00 65.12
ATOM 1889 CE2 PHE 451 53.167 12.085 4.531 1.00 64.66
ATOM 1890 CZ PHE 451 54.195 11.628 3.673 1.00 67.12
ATOM 1891 C PHE 451 48.005 9.756 2.219 1.00 56.41
ATOM 1892 O PHE 451 47.501 10.471 1.350 1.00 56.56
ATOM 1893 N PRO 452 47.260 8.954 3.009 1.00 53.28
ATOM 1894 CD PRO 452 47.678 8.027 4.076 1.00 50.46
ATOM 1895 CA PRO 452 45.797 8.910 2.866 1.00 50.26
ATOM 1896 CB PRO 452 45.388 7.976 4.000 1.00 49.19
ATOM 1897 CG PRO 452 46.558 7.010 4.039 1.00 45.89
ATOM 1898 C PRO 452 45.183 10.305 2.974 1.00 49.62
ATOM 1899 O PRO 452 45.727 11.176 3.644 1.00 52.35
ATOM 1900 N PRO 453 44.034 10.530 2.313 1.00 51.50
ATOM 1901 CD PRO 453 43.257 9.585 1.494 1.00 49.66
ATOM 1902 CA PRO 453 43.354 11.830 2.335 1.00 50.89
ATOM 1903 CB PRO 453 42.101 11.559 1.506 1.00 51.49
ATOM 1904 CG PRO 453 42.600 10.524 0.521 1.00 50.82
ATOM 1905 C PRO 453 43.030 12.405 3,706 1.00 50.99
ATOM 1906 O PRO 453 43.264 13.588 3.953 1.00 54.17
ATOM 1907 N LEU 454 42.479 11.576 4.592 1.00 51.21
ATOM 1908 CA LEU 454 42.112 12.034 5.936 1.00 47.17
ATOM 1909 CB LEU 454 41.305 10.951 6.660 1.00 44.44
ATOM 1910 CG LEU 454 40.748 11.283 8.050 1.00 41.33
ATOM 1911 CD1 LEU 454 39.838 12.504 7.978 1.00 35.93
ATOM 1912 CD2 LEU 454 39.986 10.072 8.587 1.00 34.79
ATOM 1913 C LEU 454 43.363 12.380 6.733 1.00 42.25
ATOM 1914 O LEU 454 43.387 13.357 7.475 1.00 40.82
ATOM 1915 N PHE 455 44.399 11.567 6.565 1.00 39.29
ATOM 1916 CA PHE 455 45.674 11.774 7.240 1.00 41.81

```
ATOM  1917  CB  PHE   455      46.655  10.679   6.802  1.00 47.22
ATOM  1918  CG  PHE   455      48.045  10.800   7.407  1.00 56.97
ATOM  1919  CD1 PHE   455      48.220  10.990   8.785  1.00 57.23
ATOM  1920  CD2 PHE   455      49.180  10.645   6.597  1.00 59.40
ATOM  1921  CE1 PHE   455      49.522  11.030   9.362  1.00 56.58
ATOM  1922  CE2 PHE   455      50.487  10.682   7.149  1.00 61.80
ATOM  1923  CZ  PHE   455      50.656  10.870   8.541  1.00 59.94
ATOM  1924  C   PHE   455      46.203  13.161   6.892  1.00 45.12
ATOM  1925  O   PHE   455      46.558  13.944   7.779  1.00 39.95
ATOM  1926  N   LEU   456      46.236  13.471   5.592  1.00 43.92
ATOM  1927  CA  LEU   456      46.704  14.767   5.123  1.00 44.08
ATOM  1928  CB  LEU   456      46.748  14.795   3.593  1.00 50.20
ATOM  1929  CG  LEU   456      47.796  13.921   2.903  1.00 55.79
ATOM  1930  CD1 LEU   456      47.527  13.869   1.408  1.00 54.70
ATOM  1931  CD2 LEU   456      49.187  14.473   3.193  1.00 53.01
ATOM  1932  C   LEU   456      45.782  15.871   5.616  1.00 44.65
ATOM  1933  O   LEU   456      46.219  16.987   5.887  1.00 45.93
ATOM  1934  N   GLU   457      44.500  15.549   5.726  1.00 44.56
ATOM  1935  CA  GLU   457      43.498  16.504   6.175  1.00 46.37
ATOM  1936  CB  GLU   457      42.138  15.854   6.133  1.00 50.16
ATOM  1937  C   GLU   457      43.759  17.039   7.579  1.00 43.60
ATOM  1938  O   GLU   457      43.867  18.245   7.795  1.00 42.69
ATOM  1939  N   VAL   458      43.847  16.117   8.528  1.00 43.21
ATOM  1940  CA  VAL   458      44.064  16.446   9.930  1.00 44.98
ATOM  1941  CB  VAL   458      44.020  15.159  10.802  1.00 44.83
ATOM  1942  CG1 VAL   458      44.180  15.510  12.277  1.00 49.72
ATOM  1943  CG2 VAL   458      42.708  14.427  10.567  1.00 40.89
ATOM  1944  C   VAL   458      45.368  17.178  10.209  1.00 42.72
ATOM  1945  O   VAL   458      45.393  18.139  10.974  1.00 42.88
ATOM  1946  N   PHE   459      46.451  16.743   9.574  1.00 44.53
ATOM  1947  CA  PHE   459      47.741  17.366   9.823  1.00 48.18
ATOM  1948  CB  PHE   459      48.784  16.269  10.064  1.00 43.60
ATOM  1949  CG  PHE   459      48.374  15.276  11.133  1.00 40.79
ATOM  1950  CD1 PHE   459      47.835  14.032  10.783  1.00 41.01
ATOM  1951  CD2 PHE   459      48.471  15.613  12.492  1.00 39.48
ATOM  1952  CE1 PHE   459      47.387  13.118  11.776  1.00 40.62
ATOM  1953  CE2 PHE   459      48.032  14.715  13.506  1.00 36.87
ATOM  1954  CZ  PHE   459      47.489  13.463  13.146  1.00 36.39
ATOM  1955  C   PHE   459      48.234  18.348   8.763  1.00 52.71
ATOM  1956  O   PHE   459      49.336  18.878   8.877  1.00 51.34
ATOM  1957  N   GLU   460      47.397  18.594   7.752  1.00 59.56
ATOM  1958  CA  GLU   460      47.695  19.509   6.647  1.00 66.14
ATOM  1959  CB  GLU   460      47.818  20.944   7.158  1.00 67.76
ATOM  1960  CG  GLU   460      46.536  21.511   7.724  1.00 78.99
ATOM  1961  CD  GLU   460      46.680  22.965   8.116  1.00 86.08
ATOM  1962  OE1 GLU   460      47.014  23.786   7.237  1.00 87.62
```

```
ATOM   1963  OE2 GLU   460      46.460  23.289   9.301  1.00 91.63
ATOM   1964  C   GLU   460      48.940  19.163   5.836  1.00 69.17
ATOM   1965  O   GLU   460      48.784  18.759   4.660  1.00 69.49
ATOM   1966  OXT GLU   460      50.057  19.298   6.379  1.00 76.70
ATOM   1967  C1  TRI     1      47.283   4.313  16.972  1.00 44.70
ATOM   1968  C2  TRI     1      51.052   6.807  13.814  1.00 34.01
ATOM   1969  C3  TRI     1      47.289   4.043  15.500  1.00 37.90
ATOM   1970  C4  TRI     1      51.936   6.615  12.728  1.00 33.38
ATOM   1971  C5  TRI     1      48.462   4.501  14.746  1.00 46.53
ATOM   1972  C6  TRI     1      52.294   7.653  11.847  1.00 42.90
ATOM   1973  C7  TRI     1      49.577   5.179  15.334  1.00 34.63
ATOM   1974  C8  TRI     1      51.717   9.015  12.071  1.00 38.34
ATOM   1975  C9  TRI     1      49.492   5.383  16.723  1.00 43.89
ATOM   1976  C10 TRI     1      50.779   9.237  13.172  1.00 40.43
ATOM   1977  C11 TRI     1      48.354   4.960  17.533  1.00 41.82
ATOM   1978  C12 TRI     1      50.449   8.116  14.055  1.00 35.64
ATOM   1979  C13 TRI     1      46.287   3.725  17.959  1.00 36.78
ATOM   1980  C15 TRI     1      44.825   4.150  17.865  1.00 40.69
ATOM   1981  I1  TRI     1      48.684   4.002  12.609  1.00 40.26
ATOM   1982  I2  TRI     1      53.597   7.174  10.336  1.00 46.70
ATOM   1983  I3  TRI     1      51.362   6.218  17.644  1.00 36.54
ATOM   1984  O3  TRI     1      44.546   5.255  17.329  1.00 54.78
ATOM   1985  O2  TRI     1      50.831   5.617  14.667  1.00 28.44
ATOM   1986  O1  TRI     1      52.207  10.160  11.342  1.00 43.65
ATOM   1987  O4  TRI     1      44.021   3.333  18.352  1.00 42.95
ATOM      1  AS  CAC   501      60.548  16.977  16.916  1.00 65.97      AS
ATOM      2  AS  CAC   502      27.863  16.627  16.796  1.00 89.34      AS
ATOM      3  AS  CAC   503      29.889  28.698  21.811  1.00100.00      AS
ATOM      4  AS  CAC   504      33.547  24.203   8.880  1.00100.00      AS
ATOM      5  O   HOH   505      42.365   8.872   4.597  1.00 53.88     HOH
ATOM      6  O   HOH   506      33.545  30.973  24.585  1.00 40.33     HOH
ATOM      7  O   HOH   507      37.040   1.824  12.671  1.00 61.87     HOH
ATOM      8  O   HOH   508      44.105   4.635   6.023  1.00 40.68     HOH
ATOM      9  O   HOH   509      52.686  13.817  -6.263  1.00 54.00     HOH
ATOM     10  O   HOH   510      50.186  12.691  -5.997  1.00 55.36     HOH
ATOM     11  O   HOH   511      49.278  18.540  14.006  1.00 34.79     HOH
ATOM     12  O   HOH   512      25.541  28.885  21.206  1.00 55.42     HOH
ATOM     13  O   HOH   513      27.346  31.063  27.398  1.00 58.30     HOH
ATOM     14  O   HOH   514      40.790  19.192  39.234  1.00 50.35     HOH
ATOM     15  O   HOH   515      37.467   0.637  37.293  1.00 37.46     HOH
ATOM     16  O   HOH   516      36.155   3.879  47.189  1.00 61.37     HOH
ATOM     17  O   HOH   517      35.410   5.865  50.995  1.00 63.46     HOH
ATOM     18  O   HOH   518      33.622   5.440  47.570  1.00 53.87     HOH
ATOM     19  O   HOH   519      64.787   6.888  11.882  1.00 51.15     HOH
ATOM     20  O   HOH   520      61.109  -8.688  27.722  1.00 61.70     HOH
ATOM     21  O   HOH   521      49.869  -5.472  30.343  1.00 40.50     HOH
```

ATOM	22	O	HOH	522	43.786	-0.987	26.878	1.00	52.16	HOH
ATOM	23	O	HOH	523	41.604	2.361	26.985	1.00	47.90	HOH
ATOM	24	O	HOH	524	54.405	6.361	39.795	1.00	56.56	HOH
ATOM	25	O	HOH	525	46.088	0.770	33.095	1.00	74.24	HOH
ATOM	26	O	HOH	526	50.481	16.245	15.314	1.00	28.99	HOH
ATOM	27	O	HOH	527	59.788	14.863	21.416	1.00	50.02	HOH
ATOM	28	O	HOH	528	49.282	19.490	32.191	1.00	41.61	HOH
ATOM	29	O	HOH	529	56.683	10.961	26.733	1.00	34.20	HOH
ATOM	30	O	HOH	530	56.701	9.852	30.561	1.00	51.24	HOH
ATOM	31	O	HOH	531	26.487	13.273	30.591	1.00	43.94	HOH
ATOM	32	O	HOH	532	27.019	25.052	28.330	1.00	54.97	HOH
ATOM	33	O	HOH	533	50.689	1.918	29.551	1.00	30.63	HOH
ATOM	34	O	HOH	534	47.867	0.200	31.330	1.00	43.14	HOH
ATOM	35	O	HOH	535	61.434	-0.721	23.218	1.00	49.83	HOH
ATOM	36	O	HOH	536	41.969	20.017	20.894	1.00	27.00	HOH
ATOM	37	O	HOH	537	46.897	16.244	15.992	1.00	31.50	HOH
ATOM	38	O	HOH	538	29.796	16.276	27.000	1.00	38.52	HOH
ATOM	39	O	HOH	539	47.853	23.205	20.217	1.00	44.39	HOH
ATOM	40	O	HOH	540	40.956	24.775	31.717	1.00	50.36	HOH
ATOM	41	O	HOH	541	43.310	1.560	41.912	1.00	43.56	HOH
END										